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R 447
DOCUMENTS POUR SERVIR A L'ETUDE DES
SPHINGIDAE DU VENEZUELA (LEPID., HETER.)

UNE FORME NOUVELLE DE *L'Ampllypterus tigrina* Fld.

par

René Lichy.

5 Parque Sanabria,
Caracas.

Diagnose de l'espèce:

A. tigrina Fld. Scheme of markings somewhat like that of *gan-nascus*, but the hindwings are straw-coloured. Forewing brownish tan-coloured, subbasal band interrupted, the upper portion distally removed, only an oval spot in the cell; vein 6 distinctly blackish-brown. Hindwing with distinct black veins and 3 transverse bands. Venezuela; Colombia; Ecuador; Perú; Bolivia; South Brazil. — *coronata* *Gehlen* is the race from West Colombia, distinguished by more intense whitish-grey dusting; the dark preapical spot assumes the shape of a crown the points of which show towards the base. The triangular subanal spots of the hindwing are enlarged.

(du Dr. M. DRAUDT, in "SEITZ", vol. VI, 1931, édit. angl.)

Sous le nom de *tigrina*, ont été confondues jusqu'à ce jour, deux formes très nettement différenciées. Quelques auteurs même semblent avoir ignoré ou méconnu la forme typique *tigrina* de FELDER, qui provenait du Vénézuéla (envoyée par MORITZ, qui l'avait très probablement capturée à la Colonia Tovar (Est. Aragua), sur la Cordillère de la Côte; MORITZ, qui était venu au Vénézuéla en 1835, a en effet collectionné à cet endroit; il y est mort en 1866)⁽¹⁾. Je n'en veux pour preuve que les descriptions de ROTHSCILD & JORDAN (Rev. of the Sphing., 1903) et du Dr. DRAUDT ("SEITZ", texte, et fig. pl. 97). Dans

tainement pas connu ce sphinx en nature, le décrit d'après la figure de FELDER. Sa description s'applique bien pour cela à la vraie *tigrina*. La phrase même de ROTHSCILD & JORDAN (*in Rev. Sph.*, p. 184, 1903): "♂ ♀. The upperside of the body and forewing of the type ⁽²⁾ is less brown than in fresh specimens", est éloquente à ce sujet et l'étude qui va suivre le fera comprendre sans peine.

En réalité, la véritable *tigrina* de FELDER ne concorde pas avec les descriptions précitées de ROTHSCILD & JORDAN et de DRAUDT. Si le type de *tigrina* de FELDER est moins brun que les exemplaires connus de ROTHSCILD & JORDAN, de DRAUDT, et d'autres auteurs, ce n'est pas parce qu'il est vieux, c'est qu'il appartient à une forme différente.

Je ne connais malheureusement pas l'ouvrage de FELDER (*Reise Novara Lep.*) dans lequel il a figuré *tigrina* accompagné d'une description, en latin, par trop laconique ⁽³⁾, qui se réfère seulement à la face inférieure des ailes; mais je dois à l'obligeance de mon ami John FRANÇLEMONT, de la Cornell University de Ithaca (N. Y.) — et je l'en remercie très sincèrement ici — de connaître cette description et d'avoir une aquarelle qu'il a bien voulu me faire, d'après la gravure de FELDER. Grâce à cette aide, les doutes que j'avais déjà sur la validité du nom *tigrina*, pour tous les exemplaires trouvés par moi — et je m'expliquerai plus loin d'une façon plus détaillée, sur l'origine de ces doutes — trouvaient un point d'appui solide pour édifier mon étude.

La véritable *tigrina* de FELDER est une forme saisonnière qui apparaît au début de la saison sèche et disparaît à la fin de celle-ci. Elle est alors remplacée par une forme très différente — la forme précisément la plus connue, celle que décrit ROTHSCILD & JORDAN, et DRAUDT, et qui se trouve figurée par ce dernier (SEITZ, pl. 97a). Pour cette dernière forme, de la saison des pluies, je propose le nom de *simera f. nov.*

L'apparition de formes saisonnières chez les sphinx américains des zones tropicale et subtropicale, me paraît être un fait rare ou mal étudié. Il est vrai que je suis encore bien loin d'avoir étudié à fond toutes les espèces de *SPHINGIDAE* du Véné-

nézuéla, mais je crois, d'après mes connaissances acquises à ce jour, que le cas de *tigrina* est, sinon unique, du moins fort peu répandu au Vénézuéla.

Description de la forme claire *tigrina tigrina* Fld.

♂: Longueur de l'aile antérieure de la racine à l'apex: 51-60½ mm. (comparée sur 56 spécimens).

♀: " " " " " " " " " " 68½-71 " (" " 2 ").

♂: Spiritrompe { 26 mm. (mesurée sur un exemplaire d'aile antérieure de 55 mm).
30 " (" " " " " " " " 58 ").

33 (" " " " " " 68 1/2 mm.)

♂ : FACE SUPÉRIEURE DES AILES - *aile antérieure*. Couleur foncière ocre-jaune clair (cannelle 338) ⁽⁴⁾. Mais ce coloris n'est pas uniformément réparti, de sorte que sur certaines zones viennent s'y ajouter des nuances qui en modifient légèrement la tonalité. C'est ainsi que le bord costal est faiblement nuancé de verdâtre pâle; l'espace compris entre les deux lignes ondulées antémédianes transversales jaune sale clair, est nuancé de bleuâtre très pâle, et l'espace situé entre les lignes sinueuses postmédianes brunâtres, est teinté de jaune brun en son milieu et de bleuâtre pâle sur ses bords; un saupoudré blanc, souvent très peu important même chez les exemplaires absolument frais, souligne largement les dessins de l'aile. Sur le bord externe s'étale une large plage brun sépia clair, qui s'incurve au niveau des nervures 4 à 6. Cette grande marge tranche très nettement sur le fond clair de l'aile — et c'est bien ainsi qu'on l'observe sur l'exemplaire représenté par FELDER. La nervure 6 et la DC. inférieure ont un saupoudré noir violacé. Les grandes taches typiques brun sépia très foncé, de la base de l'aile et du bord costal, près de l'apex, contrastent vivement avec la couleur du fond.

Aile postérieure: jaune orangé clair (terre ocreuse 246) ⁽⁴⁾ avec les nervures largement noircies. L'aile est traversée par trois bandes noirâtres transversales, qui coupent les nervures presque à angle droit.

FACE INFÉRIEURE DES AILES. — Il est vraiment regrettable qu'aucune des descriptions de ce sphinx — du moins celles qui

me sont connues — n'ait fait mention du dessous si caractéristique, qu'à lui seul, il définit sans aucune hésitation et du premier coup d'oeil, la forme considérée. Il est vrai que FELDER en parle dans la description originale ⁽³⁾, mais d'une façon si vague qu'elle ne peut en rien servir. En effet, "ocracé" peut être, d'après les connaissances que nous avons sur les couleurs, rouge, jaune ou brun.

Aile antérieure unicolore. La couleur qui domine est un orangé rompu (terre ocreuse 246, mais un peu plus gris), qui s'exalte en orangé-rose sur tout le disque. La marge est blanche, à peine nuancée de gris orangé; l'angle interne est orangé vif; un coloris blanc et blanc rosé s'observe sur le bord costal, d'une part non loin de l'apex, puis au milieu du même bord. Le dessin se réduit à quelques lignes imprécises, sinueuses, près de l'apex, dans la région postmédiane et près du bord interne. La DC. est assombrie de gris noirâtre.

Aile postérieure: Une ligne médiane brunâtre, transversale et presque droite, coupe l'aile en deux portions. Cette ligne s'incurve en dedans près du bord abdominal qu'elle n'atteint pas. La zone proximale ainsi délimitée, est rose pâle semée d'atomes orangé pâle, depuis le milieu de la cellule jusqu'au bord abdominal. La zone distale est orangé très clair, avec des éclaicies blanc rosé très pâle, le long des nervures et sur les bandes transversales qui correspondent aux bandes noires du dessus de l'aile. Ces bandes sont à peine visibles par transparence — il n'y a que chez les vieux exemplaires qu'elles apparaissent alors très nettement. Les espaces internervuraux 1 et 2, sont colorés de jaune et d'orangé plus vif; une courte bande noire, préanale, qui correspond à une portion de la bande du dessus de l'aile, est recouverte d'atomes carminés.

CORPS. — Le *dessus* est de la même couleur ocrée que les zones les plus claires de l'aile antérieure (339). Le front, les ptérygodes, le métathorax, le 1er segment abdominal et le segment anal, sont brun verdâtre foncé. Le dessus des palpes est blanc rosé. Une double ligne imprécise, brunâtre, par-

court le dos des segments abdominaux; un point blanc, peu visible souvent, en occupe le centre du côté postérieur de chaque segment.

Le dessous est orangé, plus vif sous les palpes et sous le thorax. Les poils blancs des côtés tranchent beaucoup moins que chez *tigrina simera*. Les derniers segments s'éclaircissent en brunâtre rose très clair. Touffe anale bistre clair. Les pattes médianes et postérieures ont un point blanc articulaire.

La ♀ présente exactement les mêmes caractères, mais les dessins distribués sur une plus grande surface d'ailes, sont évidemment beaucoup plus amples.

Description de la forme foncée: *tigrina simera f. nov.*

♂: Longueur de l'aile antérieure de la racine à l'apex: 51-60 mm. (comparée sur 64 spécimens).

♀: " " " " " " " " " 67 " (un seul spécimen).

♂: Spiritrompe { 29 mm. (d'un spécimen de 56 mm. d'aile antérieure).
31 " (" " " 59½ " " " ").

♀: " 31½ mm.

♂: FACE SUPÉRIEURE DES AILES. — *Aile antérieure*: Couleur foncière brun olivâtre. La majeure partie de l'aile est recouverte de brun violet (708). Une aire un peu plus vive (707) occupe l'espace compris entre la base de la nervure 4 jusqu'au bord interne; elle est délimitée du côté proximal par un large saupoudré médian blanc, et du côté distal par les doubles lignes sinueuses noires, qui naissent près de l'angle interne; une large tache brun sépia foncé, diffuse sur ses bords, occupe le milieu de cette aire, dans l'espace internervural 3. Toute la nervure 6 et les DC. sont recouvertes d'une nuance brun violet foncé. Le bord costal est largement nuancé de brun olivâtre clair. Cette même couleur s'avance aussi dans les espaces internervuraux 6 et 7 et se diffuse, çà et là, dans la tonalité brun violet de l'aile. Une très large plage marginale brun sépia foncé, part de la nervure 7 pour aboutir à l'angle interne; elle s'élargit considérablement au niveau des nervures 5-6; cette grande bande ne tranche guère sur le fond déjà sombre de l'aile. Un gros point brun noir à reflet pourpre, est situé tout près de la base de l'aile. Au-delà, une bande

post-basale, de la même couleur, naît au bord interne et se termine, très arrondie, au niveau de la médiane; un peu avant le milieu de la cellule, il y a une tache ovale, brun presque noir; de même couleur, une grande tache arrondie, non loin de l'apex, qui part du bord costal et aboutit à la nervure 7 qu'elle dépasse à peine. Un large saupoudré blanc souligne les taches sépias, ainsi que le parcours des lignes sinueuses —celles-ci sont à peine visibles sur le fond très sombre de l'aile. Chez certains individus, ce pointillé blanc est souvent très important, alors que chez d'autres, même absolument frais, il est peu marqué. Il disparaît presque entièrement chez les vieux papillons.

Aile postérieure: La seule différence à noter par rapport à *tigrina tigrina*, est une exagération de la couleur noire qui parcourt les nervures jusqu'à la cellule, ainsi que par une plus grande importance des bandes transversales noirâtres, qui coupent les nervures presque à angle droit. L'aile postérieure se trouve, de la sorte, fortement assombrie.

FACE INFÉRIEURE DES AILES. — *Aile antérieure:* Couleur foncière presque uniforme, rouge orangé vif (172), nuancée de vermillon clair dans le disque. La nervure 8 est éclairée de blanc rosé en son milieu, et une grande tache rosée, au niveau de la base de l'espace internervural 7, fait suite à une petite tache costale préapicale, blanche. Une longue bande terminale qui s'incurve en dedans — le point le plus saillant est situé sur la nervure 5 — correspond à la plage marginale du dessus. L'intérieur de cette bande est nuancé de brun saupoudré, çà et là, de rose, et la marge est blanche. Les franges sont blanches à l'intérieur et noires à l'extérieur. Le bord interne est jaune clair, de la base jusque près de l'angle interne. Quelques lignes imprécises noirâtres correspondent aux dessins du dessus — mais ces lignes sont bien moins nombreuses que sur la face supérieure de l'aile. Les DC. sont assombries de gris noirâtre.

Aile postérieure: La ligne médiane brune est semblable à celle de *tigrina tigrina*, et elle délimite aussi deux zones. La zone proximale est rose (écailles roses sur un fond jaune orangé) et la zone distale est du même rouge orangé vif que

l'aile antérieure. Les bandes du dessus se devinent sous forme d'ombres plus foncées, sur lesquelles existe un saupoudré blanc et rose, plus important vers le bord costal et entièrement absent vers le bord abdominal. Dans chacun des espaces 1 et 2, il y a une tache jaune vif — c'est le fond réel de l'aile qui, à cet endroit, est normalement dépourvu d'écailles rouges. On observe dans l'espace internervural 2, une courte portion noire de la 2me bande transversale, qui apparaît à cet endroit très nettement. Les DC. sont assombries de gris noirâtre. Les marges externe et abdominale, sont brun sépia; les franges sont entremêlées d'écailles blanches et brunes.

CORPS. — *Dessus*: occiput, thorax et abdomen, brun gris violacé entremêlé de poils roux; ceux-ci sont plus répandus sur les derniers segments abdominaux. Le front, les ptérygodes, le métathorax, le 1er segment abdominal et le segment anal, sont brun pourpré très foncé. Un point blanchâtre est situé sous chacun des ptérygodes. Une ligne dorsale sombre, de couleur grise, parcourt le dessus des segments abdominaux; elle porte sur chacun de ces segments, un point blanc postérieur. Le dessus des palpes est gris entremêlé de blanc. Les côtés de l'abdomen sont pourvus de fins poils blancs qui ressortent nettement.

Le *dessous* du corps, depuis les palpes jusqu'au 7ème segment abdominal, est rouge orangé très vif (181, un peu plus sombre). Les deux derniers segments et une partie du 7ème segment abdominal sont brun gris; touffe anale rousse. Les pattes médianes et postérieures ont un point blanc à l'articulation du fémur et du tibia. Le dessus de la tige de l'antenne est violâtre, le dessous est brun rougeâtre et les soies sont rousses.

La ♀ présente les mêmes dessins et à peu près les mêmes tonalités, mais comme l'unique exemplaire que je connaisse de cette forme est un peu défraîchi, je ne puis trop m'avancer à la décrire en détail. Le dessus des ailes antérieures est un peu plus rougeâtre que chez des ♂ ♂ même frottés. En comparant cette ♀ avec d'autres ♂ ♂ également vieux, je crois pouvoir en déduire qu'une ♀ fraîche éclore doit avoir les

ailes antérieures légèrement plus claires que des ♂♂ de même état. Mais la ♀ de la saison des pluies ne doit jamais être aussi claire que la ♀ de *tigrina tigrina*, si j'en crois les trois exemplaires de ma collection.

1 ♂ (Holotype), longueur d'aile antérieure: 59½ mm., spiritrompe: 31 mm. Provenance: forêts des hauteurs de Choroni, 1575-1620 m. alt. (Aragua), 29-VIII-1940. 63 paratypes ♂♂, de différentes places du Venezuela septentrional.

1 ♀ (Allotype), longueur d'aile antérieure: 67 mm., spiritrompe: 31½ mm. Provenance: forêts des hauteurs de Choroni, 1575-1620 m. alt. (Aragua), 25-VIII-1940.

Quelques paratypes sont destinés aux Musées suivants: Museo de Historia Natural de Caracas, United States National Museum, Cornell University (U. S. A.), Carnegie Museum at Pittsburgh, où se trouve la grande collection de *SPHINGIDAE* de B. Preston CLARK, Museum d'Histoire Naturelle de Paris, Tring Museum (England). Quelques collectionneurs spécialisés dans l'étude des Sphingidés (O. MOOSER, de Mexico, J. G. FRANÇLEMONT (U. S. A.), OITICICA, de Rio de Janeiro, etc.) recevront chacun un ou deux paratypes.

Il est très facile de séparer les deux formes étudiées, chez les exemplaires frais. Pour les vieux spécimens, il faut surtout avoir recours à la comparaison du dessous des quatre ailes: le saupoudré rouge de *tigrina simera* ne manque, en effet, jamais complètement, même chez les papillons très vieux.

On pourrait nommer un certain nombre de formes et d'aberrations, mais ce serait, à n'en pas douter, des noms peu valables et superflus. Je ne m'en tiendrai pour mon compte, qu'aux deux formes extrêmes: *tigrina tigrina* et *tigrina simera*.

Je puis néanmoins signaler ici, succinctement, quelques variétés observées.

Variété a). — Une forme intermédiaire entre *tigrina tigrina* et *tigrina simera*, des hauteurs de Choroni (1 spécimen ♂, très frais, du 6-IV-1940), est fort intéressante en ce sens que tout en présentant les mêmes caractères que la forme claire *tigrina* — à laquelle elle appartient encore — elle semble annoncer la forme foncée *simera* par un très léger saupoudré

rougeâtre, qui commence à couvrir le dessous des ailes, surtout des antérieures. Le dessus des ailes correspond en tout point, aux caractéristiques de la forme *tigrina tigrina*. La longueur de ses ailes antérieures est de 54 mm.

Variété b). — Une forme intermédiaire très proche de *tigrina simera*; par le dessus, elle appartient à *tigrina simera*, mais le dessous, quoique saupoudré de rouge, est plus clair que chez cette dernière, se rapprochant ainsi de *tigrina tigrina*. Dans le tableau qui suit, je l'indique comme *tigrina simera* (1 ♂ frais, des hauteurs de Choroni, 6-III-1943, et 1 ♂ très vieux, du même endroit, 9-III-1943).

Variété c). — Certains individus de *tigrina simera* présentent sur la face supérieure des ailes antérieures, un saupoudré blanc fort étendu — un peu comme chez la forma *coronata* Gehl. de Colombie occidental. Plusieurs exemplaires des forêts de Choroni, 1575 m., VIII-1940.

Variété d). — De *tigrina simera*. Chez celle-ci, on y observe sous les ailes postérieures, un accroissement assez important du saupoudré blanc rose. 1 exemplaire des forêts de Choroni, 1575 m. d'altitude, 24-VIII-1940.

Variété e). — De la forme *tigrina tigrina*. 1 exemplaire absolument frais des forêts de Choroni, 1575 m. d'alt., 23-II-1941. Le dessous des ailes antérieures est très fortement dessiné de noirâtre, comme s'il s'agissait d'un spécimen très frotté, dont les dessins du dessus apparaîtraient par transparence.

C'est en février 1940, au cours d'une excursion dans les forêts des hauteurs de Choroni, que j'eus la preuve de l'existence de deux formes différentes chez *A. tigrina*. Avant de publier une note sur cette découverte, je désirai faire quelques observations complémentaires, notamment en ce qui concerne les périodes d'apparition des deux formes. Je me proposai alors d'effectuer chaque mois ou presque, le voyage de Caracas jusqu'aux forêts de Choroni, situées à 140 km. de la capitale. C'est ce que je fis pendant plus de trois ans.

Les résultats obtenus m'ont bien prouvé que je n'avais pas sous les yeux une simple forme aberrante sans autre importance.

Je fus amplement favorisé dans mes observations du fait que mes captures en ces lieux, furent aussi abondantes en individus, que variées en espèces. L'endroit que j'avais choisi dans les forêts situées entre Maracay et Choroni, à une altitude de 1575-1620 m. est particulièrement bien exposé. C'est ce que l'on peut appeler un "excellent coin de chasse" ⁽⁵⁾. Les montagnes, couvertes de belles forêts primaires, y forment un vaste demi-cercle largement ouvert du côté nord sur la mer, qui est située à plus de 40 km. de là. Cette énorme dépression boisée, protégée au sud par les flancs abrupts des montagnes, est presque constamment envahie par le brouillard. Si j'ai dit plus haut que *tigrina* se présentait sous deux formes saisonnières, l'une de la saison sèche, l'autre de la saison des pluies, c'est bien faute d'un autre vocable mieux approprié. Comment! en effet, parler d'une saison sèche en ces lieux où l'humidité est telle que les rochers suintent constamment d'eau, et où la pluie est si fréquente qu'il n'est pas exagéré d'affirmer qu'elle tombe presque journellement dans les années normales.

On se trouve dans le cas de *tigrina*, devant deux formes probablement "fixées" au cours d'une lente évolution, que les conditions climatiques particulières à la région considérée, ne peuvent en aucune façon modifier à nouveau. D'ailleurs les genitalia qui sont bien différenciés ne laissent aucun doute à ce sujet: ce sont deux formes différentes (cf. photos à la fin de cet article). L'armature génitale ♂ de la forme foncée *tigrina simera* concorde avec la description qu'en fait ROTHSCHILD & JORDAN (*in* Rev. of Sphingidae, 1903, p. 184). Ces auteurs n'ont certainement pas dû disséquer le ♂-type de la collection FELDER, sinon un autre exemplaire du Tring Museum, appartenant sans aucun doute à *tigrina simera*.

Mais on sait également que la végétation dans ces forêts très pluvieuses, subit un ralentissement très marqué dans leur croissance — quand ce n'est pas un total arrêt — durant les mois de janvier, février, mars et avril, c'est-à-dire les

mois qui, en d'autres régions, appartiennent à la saison sèche. Cette particularité peut également influencer sur la différenciation des formes de *tigrina*, cette cause pouvant agir dans le même sens qu'une véritable sécheresse, sur la variabilité de l'espèce.

Mais n'ayant pas encore fait d'études biologiques sur les premiers états de *tigrina*, il est évident que je ne puis qu'établir des hypothèses. Les causes réelles de cette séparation en deux formes, restent encore sans solution.

Le tableau qui suit, fait comprendre d'une façon plus claire, le cycle d'apparition des formes étudiées. Je puis dire qu'aucune exception ne s'est présentée, pendant mes observations de quatre ans déjà, ce qui m'autorise à séparer les deux formes *tigrina tigrina* et *tigrina simera*, l'une, *tigrina tigrina*, propre à la saison sèche (de janvier à fin avril ou début de mai), et l'autre, *tigrina simera* appartenant à la saison des pluies (fin avril à fin décembre). Des éclosions tardives chez *tigrina simera* et prématurées chez *tigrina tigrina*, peuvent évidemment avoir lieu — ou l'inverse. (J'ai ainsi trouvé 1 *A. tigrina simera*, très frais éclos le 6-IV-1940).

Le matériel très important collectionné presque exclusivement en cet endroit, prouve combien *A. tigrina*, réputé rare, peut se montrer commun en certains points bien localisés. Je puis dire qu'à chacune de mes excursions en ces lieux — et même à chaque nuit de chasse — j'ai pris au moins un exemplaire de cette espèce.

D'après cela, il ne faudrait toutefois pas en déduire que *A. tigrina* est commun partout au Vénézuéla. J'ai bien souvent excursionné dans des régions très voisines à ces lieux, ou dans les mêmes forêts, mais à d'autres altitudes et semblant aussi propices à l'espèce, sans qu'il m'ait été possible de capturer un seul exemplaire.

Je regrette vraiment de ne pouvoir présenter une étude plus complète, notamment en ce qui concerne les premiers stades, mais des obligations à la capitale ne m'ont pas encore permis de consacrer le temps nécessaire aux études et investigations biologiques en ces forêts.

**Tableau détaillé de l'apparition des formes *tigrina tigrina*
et *tigrina simera*, d'après leurs captures échelonnées de
juillet 1937 à avril 1943.**

Dates de captures	Localités et altitudes	<i>Amphlypterus tigrina tigrina</i> <i>Fld.</i>	<i>Amphlypterus tigrina simera</i> <i>f. nov.</i>	Heures d'appari- tion aux lumières
VII-1937	d	.....	1 ♂ (t.v.)	20 h.
25-VII-1938	a	.....	1 ♂ (t.f.)	19 h. 10
23-XII-1938	c	.....	1 ♂ (p.f.)	19 h. 15
13-VIII-1939	a	.....	2 ♂ (t.f., p.f.)	19 h. 15/20 h.
20-VIII-1939	c	.....	1 ♂ (f.)	19 h.
22-VIII-1939	c	.....	1 ♂ (v.)	2/3 h.
11-IX-1939	d	.....	1 ♂ (t.f.)	19 h. 45
4-II-1940 ^(a)	b	{ 1 ♀ (a.f.) 1 ♂ (t.f.) 4 ♂ (t.f., a.f.)	..... ..... .....	22 h. 40 1 h. 18 h. 50/19 h. 15
5-II-1940 ^(a)	b	3 ♂ (t.f., f., v.)	.....	19 h./20 h.
2-III-1940 ^(a)	b	{ 7 ♂ (t.f., f.) 1 ♂ (v.)	..... .....	18 h. 50/20 h. 4 h.
6-IV-1940 ^(a)	b	5 ♂ (t.f., f., v.)	1 ♂ (t.f. éclos)	19 h. 20/19 h. 40
7-IV-1940 ^(a)	b	1 ♂ (f.)	.....	19 h. 20
4-V-1940	b	2 ♂ (p.f., t.v.)	1 ♂ (v.)	19 h. 30/20 h.
5-V-1940	b	1 ♂ (t.v.)	.....	19 h. 45
6-VIII-1940	c	.....	1 ♂ (t.f.)	21 h.
23-VIII-1940	b	.....	3 ♂ (t.f.)	19 h./19 h. 30
24-VIII-1940	b	.....	8 ♂ (t.f., f., t.v.)	19 h. 30/19 h. 50
25-VIII-1940	b	.....	{ 2 ♂ (t.f.) 1 ♀ (p.f.)	19 h. 30 19 h. 20
26-VIII-1940	b	.....	2 ♂ (t.f., a.f.)	19 h. 30/20 h.
28-VIII-1940	b	.....	1 ♂ (v.)	19 h. 30
29-VIII-1940	b	.....	6 ♂ (f., a.f.)	19 h. 30/20 h. 15
30-VIII-1940	b	.....	4 ♂ (t.f.)	19 h. 30/20 h. 30
31-VIII-1940	b	.....	2 ♂ (t.f., v.)	19 h. 40/19 h. 50
1-IX-1940	b	.....	{ 3 ♂ (p.f., v.) 1 ♂ (p.f.)	19 h. 30/20 h. 23 h. 45
22-IX-1940	d	.....	1 ♂ (f.)	19 h. 40
27-X-1940	b	.....	2 ♂ (t.f.)	18 h. 50/19 h.
1-XII-1940	b	.....	1 ♂ (p.f.)	19 h. 30
25-I-1941	b	1 ♂ (p.f.)	1 ♂ (v.)	19 h. 30/23 h.
26-I-1941	b	1 ♂ (t.f.)	.....	19 h. 10
23-II-1941	b	2 ♂ (t.f.)	.....	19 h. 30/3 h. 30
24-II-1941	b	3 ♂ (t.f., t.v.)	.....	19 h./19 h. 30
25-II-1941	b	2 ♂ (t.f., f.)	.....	19 h. 15/19 h. 30
25-V-1941	b	1 ♂ (t.v.)	1 ♂ (t.f.)	19 h. 10/19 h. 30
19-XII-1941	b	.....	1 ♂ (a.f.)	18 h. 50
20-XII-1941	b	.....	1 ♂ (t.f.)	18 h. 45
17-I-1942	b	2 ♂ (t.f.)	1 ♂ (t.v.)	19 h. 05/19 h. 15
18-I-1942	b	2 ♂, 1 ♀ (f., a.f.)	.....	19 h. 05/19 h. 20
15-II-1942	e	1 ♂ (a.f.)	.....	18 h. 50

(Concluye el Cuadro anterior)

Dates de captures	Localités et altitudes	<i>Amplypterus tigrina tigrina</i> Fld.	<i>Amplypterus tigrina simera</i> f. nov.	Heures d'appari- tion aux lumières
2-IV-1942	d	2 ♂ (t.f.)	.....	19 h. 10/19 h. 20
13-VI-1942	b	.....	1 ♂ (f.)	19 h. 30
14-VI-1942	b	.....	2 ♂ (t.f., f.)	18 h. 55/19 h. 35
31-VIII-1942	c	.....	1 ♂ (f.)	19 h. 15/20 h.
3-IX-1942	c	.....	1 ♂ (f.)	19 h. 30
7-IX-1942	c	.....	1 ♂ (t.f.)	19 h. 20
4-I-1943	c	.....	1 ♂ (p.f.)	19 h. 15
6-III-1943 ^(a)	b	4 ♂ (a.f., f., t.f.)	1 ♂ (f.) ⁽ⁿ⁾	19 h. 05/20 h. 30
7-III-1943 ^(a)	b	1 ♂ (t.f.)	.....	19 h. 20
9-III-1943 ^(a)	b	3 ♂ (t.f.)	1 ♂ (t.v.) ⁽ⁿ⁾	19 h. 15/21 h.
20-IV-1943	d	1 ♂ (f.)	.....	19 h. 15
21-IV-1943	d	1 ♂ (a.f.)	.....	19 h. 30
23-IV-1943	d	1 ♂ (a.f.)	.....	19 h. 30/20 h.
24-IV-1943	d	1 ♂ (p.f.)	.....	19 h. 30/20 h.
25-IV-1943	d	2 ♂ (f., t.f.)	.....	19 h. 30/20 h. 30
reçu d'un chasseur, en décembre 1940	e	.....	3 ♂ (f., a.f.)	
		total: 56 ♂ 2 ♀	total: 64 ♂ 1 ♀	
		58	65	
		Total pour les deux formes: 120 ♂ 3 ♀		
			123	

De l'étude de ce tableau, il en découle plusieurs enseignements:

- A). — Presque tous les exemplaires proviennent du même endroit. Et j'ai fait comparativement bien plus d'excursions en d'autres lieux des "Estados Carabobo, Aragua, Miranda" et du "Distrito Federal".
- B). — A quelque forme qu'il appartienne, il est bien rare que *A. tigrina* vienne aux lumières après 21 h. Sur plus de cent captures, il n'y a que sept exceptions.
- C). — La forme *tigrina simera* commence à disparaître en janvier (spécimens vieux encore capturés), et réapparaît en avril-mai (exemplaires très frais). L'inverse se produit pour la forme *tigrina tigrina*.

- D). — L'espèce vole toute l'année sans aucune interruption. Dans les mois de transition (mai, décembre), les papillons sont, en général, de vieux spécimens.
- E). — Les ♀♀ sont très difficilement attirées par les lumières.
- F). — C'est une espèce essentiellement forestière, des hautes montagnes. Sa rencontre dans les forêts du rio Borburata, à 650 m. seulement d'altitude est singulière; mais cela s'explique par la situation vraiment particulière de ces forêts qui, tout en étant situées à basses altitudes, entre 200 et 700 m., présentent exactement les mêmes caractéristiques que des forêts pluviales des hautes régions. Cette observation a été confirmée par mon excellent ami, le botaniste Francisco TAMAYO au cours d'une excursion en sa compagnie: les plantes qu'il a récoltées en ces forêts basses appartiennent aux espèces des hautes régions montagneuses.

Abréviations et lettres conventionnelles

- t.f.) très frais.
- f.) frais.
- a.f.) assez frais.
- p.f.) pas frais.
- v.) vieux.
- t.v.) très vieux.
- a.) Forêts montagneuses peu explorées, situées entre Maracay et le port de Choroni, sur le versant nord de la Cordillère du Littoral (Aragua), 1.170 m. d'altitude.
- b.) Mêmes forêts, mais à plus haute altitude (1.575-1.620 m.)
- c.) Forêts peu explorées des montagnes, entre Maracay et Ocu-mare de la Costa, sur le versant sud de la Cordillère du Littoral; cet endroit est appelé "Rancho Grande" (Aragua), 1.000-1.200 m. d'altitude.
- d.) Crête de la Cordillère du Littoral, à 22/23 km. au sud-ouest de Caracas, aux lieux dits "El Junquito". Forêts pluviales (D. F.), 1.940-2.000 m. d'altitude.
- e.) Vallée du rio Borburata (Carabobo), Cordillère du Littoral, versant nord; grosses forêts vierges, en grande partie inconnues; 675 m. d'altitude. Forêts pluviales ressemblant aux forêts des hautes régions montagneuses.

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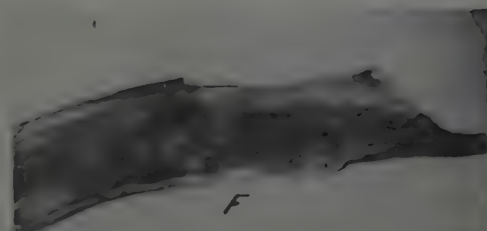
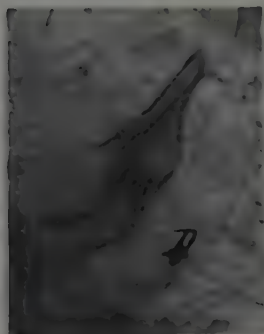
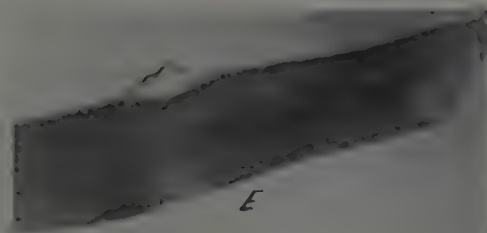
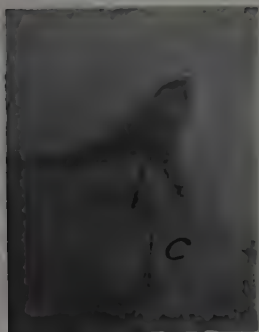
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- (1) Description originale de l'*Ampllypterus tigrina*, in "Reise Novara Lep.", t. 77, f. 4, 1874.
- (2) Le "type" de FELDER existe en effet dans la collection de ROTHSCCHILD, au "Zoological Museum de Tring" (England).
- (3) "Subtus unicoloriter ochracea".
- (4) Les chiffres entre parenthèses, correspondent aux N° des couleurs du "Code Universel des Couleurs", de E. SEGUY, Paris, 1936.
- (5) Les forêts qui environnent la "Colonia Tovar" (Aragua), d'où provenait, je présume, le "type" de FELDER, ne sont pas très éloignées, en droite ligne, des forêts de Choroni (Aragua).
- (6) Alors que la sécheresse battait son plein, à Caracas et dans toute la vallée de Aragua, les forêts de Choroni étaient presque toujours envahies de brouillard et la pluie, très forte, n'a jamais fait défaut à chacune de ces excursions.
- (7) Voir variété b.

NOTE: Une aquarelle de chacune des formes de *tigrina* (dessus et dessous des ailes), avait été exécutée pour accompagner cet article. Les difficultés provoquées par la guerre, nous empêchent malheureusement de les publier actuellement.

RESUMEN

En este artículo se coloca en su verdadero rango subespecífico a un lepidóptero de la familia *SPHINGIDAE*, poco conocido, de Venezuela: *Ampllypterus tigrina tigrina* Fld., cuyo tipo, descrito por FELDER en 1874, provenía de la Colonia Tovar (Aragua). También se describe de este esfíngido, una forma nueva de la estación de las lluvias: *Ampllypterus tigrina simera*. El trabajo está acompañado de una lámina con fotografías de genitalia ♂ de ambas formas.

- A.— *Ampllypterus tigrina tigrina*, uncus et scaphium.
 B.— " *tigrina simera*, uncus et scaphium.
 C.— " *tigrina tigrina*, harpe.
 D.— " *tigrina simera*, harpe.
 E.— " *tigrina tigrina*, penis.
 F.— " *tigrina simera*, penis.



TIPULIDAE NUEVOS O POCO CONOCIDOS DE
VENEZUELA (DIPTERA)

NEW OR LITTLE-KNOWN TIPULIDAE FROM
VENEZUELA (DIPTERA)

Part I

by

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In the present series of papers, I wish to discuss certain of the undescribed and uncommon species of Tipulidae from Venezuela. Almost our only recent knowledge of the crane-flies of this vast republic result from collections made by Mr. Pablo J. Anduze and Mr. Gaston Vivas-Berthier, whose material has been submitted to me for study and report. I am very deeply indebted to Messrs. Anduze and Vivas-Berthier for the privilege of retaining the type specimens in my own very extensive collection of these flies. Duplicates will be returned for the collection of the Instituto Nacional de Higiene. In this initial report I am discussing certain of the species above mentioned, together with one further species from unusually high altitudes in the Venezuelan Andes, collected by my long-time friend, Mr. Axel A. Olsson, petroleum geologist, who for the past quarter of a century has sent me many fine species of Tipulidae from many of the republics of South and Central America.

Tanypremna (Tanypremnella) gentilis sp. n.

General coloration of praescutum obscure yellow, with four scarcely indicated brownish yellow stripes that are vaguely and incompletely bordered by darker; a narrow transverse brown stripe on mesopleura; tarsi and tips of tibiae white; wings crystalline, the oval stigma dark brown; *Rs* nearly straight; petiole of cell M_1 shorter than *m*; abdominal segments yellow, their broad posterior borders brownish black.

Female.—Length about 8 mm.; wing 10 mm.

Frontal prolongation of head obscure yellow, with well-developed nasus; palpi brown. Antennae with scape obscure yellow; pedicel very pale yellow; flagellum broken. Head orange; no vertical tubercle.

Pronotum weakly infuscated medially, paling to yellow on sides. Mesonotal praescutum obscure yellow, with four scarcely indicated brownish yellow stripes that are virtually concolorous with the ground, indicated by very vague darker borders, including a median brown vitta on about the cephalic half of sclerite; posterior sclerites of notum slightly darker, yellowish brown, the lateral portions of mediotergite and the pleurotergite more uniformly yellow. Pleura yellow, the cephalic portion of the mesepisternum weakly darkened to form a narrow and poorly defined dark transverse band. Halteres with stem testaceous, knob darkened. Legs with the coxae and trochanters yellow; femora obscure yellow, the tips abruptly brown, the amount subequal on all legs; tibiae brown, the tips whitened; tarsi white. Wings crystalline, the oval stigma dark brown; cell *Sc* brownish yellow; veins brown. Venation: *Rs* nearly straight; R_3 a trifle longer than R_{2+3} ; *r-m* distinctly preserved; petiole of cell M_1 shorter than *m*; cell 2nd *A* wider than in *transfasciata*.

Abdominal segments strongly bicolored, the basal rings yellow, the broad posterior borders brownish black.

Holotype, ♀, Akuriman, Gran Sabana, October 29, 1940 (*Anduze*).

Tanypremna (Tanypremnella) gentilis is closest to *T. (T.) transfasciata* Alexander, of Ecuador, differing especially in the details of coloration and venation. Hitherto about six species of the subgenus *Tanypremnella* Alexander had been defined, all from Ecuador and Peru.

Tipula olssoniana sp. n.

Belongs to the *glaphyroptera* group; allied to *procericornis*; wings of male fully-developed, of female reduced to small blackened pads; antennae (male) a little longer than one-half the body, black throughout, terminal segment elongate; vestiture of flagellar segments short and inconspicuous; wings (male) strongly infumated, with a longitudinal whitish stripe extending the entire length; R_{1+2} atrophied; male hypopygium with the ninth tergite simply emarginate; eight sternite with a small median lobe that is a trifle shorter than its breadth across base.

Male.—Length about 9-10 mm.; wing 10.5-11 mm.; antenna about 5.3-5.4 mm.

Female.—Length about 14 mm.; wing about 1 mm.

Frontal prolongation of head dark gray, with black setae; nasus stout; palpi black. Antennae (male) of moderate length, a little exceeding one-half the length of body, black throughout; flagellar segments moderately incised; verticils very short; pubescence of segments abundant but pale and inconspicuous; terminal (thirteenth) segment elongate, a little exceeding the penultimate in length. Antennae (female) only 12-segmented; first flagellar segment very long, exceeding the succeeding three combined; outer flagellar segments short-cylindrical; terminal segment a trifle longer than the penultimate. Head gray, the center of the vertex more infuscated.

Pronotum gray, narrowly infuscated medially. Mesonotum gray, the praescutum with three brown stripes, the median one broad, the lateral stripes unusually narrow; praescutal interspaces with a few dark setigerous punctures; scutal lobes each with two brownish areas; scutellum and

postnotum clear light gray. Pleura gray; dorsopleural membrane infuscated. Halteres relatively long, stem dark brown, knob blackened. Legs with coxae and trochanters gray; remainder of legs black, the femoral bases more reddish brown, most extensive on posterior legs; claws simple; legs of male much longer and more slender than in female. Wings (male) relatively narrow, fully-developed; membrane strongly infumated, with a conspicuous whitish longitudinal stripe extending the entire length of wing, involving the bases of cells 1st A and 2nd A, the central portion of Cu, more than the outer half of cell M, all of 1st M₂, extreme base of 2nd M₂, attaining wing-tip in outer end of cell R₅; cells C and Sc, with the stigma, a little more yellowish brown; prearcular field chiefly darkened; veins brown, a little more brightened in the costal field. Venation: R₁₊₂ atrophied, at most represented by a short spur; petiole of cell M₁ subequal in length to cell. In female, the wings are reduced to microscopic blackened pads, somewhat elongate, and with the costal border conspicuously setiferous.

Abdominal tergites chiefly dark brown, the caudal borders of the segments restrictedly brownish yellow, the lateral margins more grayish; hypopigium chiefly dark brown; the dististyles obscure yellow. In female, abdomen more elongate, lighter brown, the tergites with three slightly darker stripes; genital shield blackened; cerci long and straight. Male hypopygium with the caudal margin of tergite shallowly notched, the lateral lobes thus formed very obtuse. Outer dististyle small, only moderately expanded. Inner dististyle large and conspicuous, the lobes blackened and obtusely rounded. Eighth sternite with a small median lobe that is a trifle shorter than the breadth across the base, provided with long yellow setae that considerably exceed the lobe in length.

Holotype, ♂, Paramo de Mucuchies, Merida, between the cities of Merida and Trujillo, altitude 4,080 meters, April 3, 1942 (A. A. Olsson); swarming in bright sunlight. *Allotopotype*, ♀. *Paratopotypes*, 9 ♂♂.

I am pleased to name this distinct *Tipula* after the collector, who was my boyhood friend and college room-mate

for many years. The nearest relative of *Tipula olssoniana* is *T. procericornis* Edwards, from high altitudes in the Ecuadorian Andes (3,800-3,900 meters). This latter fly, of which I possess a paratype through the kindness of Mons. Eugene Séguy, has very long antennae in the male, with greatly lengthened flagellar segments that are clothed with a long conspicuous blackened pubescence. The structure of the male hypopygium, especially of the inner dististyle, is distinct in the two flies. Both species have vein R_{1+2} either entirely atrophied or virtually so.

Limonia (Geranomyia) vindicta sp. n.

Allied to *canadensis*; general coloration obscure yellow, the praescutum darkened medially behind, the centers of the scutal lobes similarly darkened; pleura testaceous yellow; knobs of halteres dark brown; legs pale brownish yellow; wings with a pale yellow tinge, the oval stigma brown; Sc_1 ending about opposite midlength of R_s ; male hypopygium with the rostral prolongation of the ventral dististyle very short and blunt, with two spines, one from a low tubercle; gonapophyses pale, terminating in an acute black spine; aedeagus covered with microscopic setulae.

Male.—Length, excluding rostrum, about 6 mm.; wing 7 mm.

Rostrum dark brown, pale basally; evidently rather elongate but the tip broken; maxillary palpi near base. Antennae black, the scape and pedicel brownish yellow; flagellar segments subcylindrical to weakly fusiform, with truncated ends; terminal segment a trifle longer than the penultimate. Head buffy brown.

Pronotum obscure yellow. Mesonotum obscure yellow, very restrictedly patterned with pale brown, including a central area on praescutum before the suture and the centers of the scutal lobes. Pleura testaceous yellow. Halteres with stem pale, knob dark brown. Legs with the coxae and trochanters yellowish testaceous; remainder of legs pale brownish yellow, the femora unpatterned; tarsi scarcely darker.

Wings with a pale yellow tinge, unpatterned except for the oval brown stigma; veins pale brown, *Sc* and the basal veins more yellow. Venation: *Sc* moderately long, *Sc*₁ ending about opposite midlength of *Rs*, *Sc*₂ near its tip; a supernumerary crossvein in cell *Sc*; *Rs* nearly straight, about twice the basal section of *R*₄₊₅; cell 1st *M*₂ short-rectangular, shorter than any of the elements beyond it; *m-cu* close to fork of *M*.

Abdominal tergites and hypopygium brown, the esternites paler. Male hypopygium with the tergite transverse, the caudal margin straight or virtually so. Basistyle much smaller than the ventral dististyle. Dorsal dististyle acutely pointed at tip. Ventral dististyle very large, its rostral prolongation unusually short and blunt, with two spines, one arising from a very low tubercle, the other sessile; spines acutely pointed, subequal in length but appearing slightly unequal because of the differences in the basal tubercles, longer than the rostral prolongation itself. Gonapophyses with mesal-apical lobe erect, pale, terminating in an acute black point. Aedeagus terminating in two narrow oblong lobes, closely appressed to one another, separated only by a linear split; surface of aedeagus with abundant microscopic setulae.

Holotype, ♂, Rio Chacaito, Miranda, altitude 980 meters, September 18, 1938 (*Vivas-Berthier*); Collector's N° 39.

In the nature of the pattern of the body and wings, *Limonia* (*Geranomyia*) *vindicta* is apparently closest to species such as *L. (G.) canadensis* (Westwood), differing notably in the details of structure of the male hypopygium, as the very obtuse rostral prolongation and the blackened tips of the gonapophyses. It should be noted that all members of the group have delicate setulae on the aedeagus but these are very sparse and insignificant in some species, such as *L. (G.) guatemalensis* (Alexander); longer and more abundant, but still pale and inconspicuous in others, such as *L. (G.) argentinensis* Alexander, *L. (G.) austroandina* Alexander, *L. (G.) canadensis* (Westwood), *L. (G.) distinta* (Doane) and *L. (G.) vanduzeei* (Alexander); coarsest and most conspicuous in the present fly.

Limonia (Geranomyia) cinereinota (Alexander).

1913. *Geranomyia cinereinota* Alexander; Ent. News, 24: 407-408 (Bolivia, British Guiana).

Widely distributed in South and Middle América. San Esteban, Estado Carabobo. December 30, 1939 (*Anduze*).

Orimarga (Orimarga) excessiva Alexander.

1926. *Orimarga excessiva* Alexander; Ann. Ent. Soc. America, 19: 380-381 (Venezuela).

Described from Tachira, Venezuela. The description of the thorax of the type is erroneous. The central portion of the praescutum is almost black, laterally paling to more grayish; sclerites below and behind the wing-base more brightened. The legs of the unique type were broken; femora and tibiae black, tarsi snowy white with only the last segment darkened.

Allotype, ♂, Borburata, Estado Carabobo, altitude 500 meters, March 15, 1940 (*Anduze*). One additional male taken with the allotype.

Orimarga (Diotrepha) fumicosta elongata subsp. n.

Much as in typical *fumicosta* Alexander but larger and with the venational details distinct.

Male. — Length 7-8 mm.; wing 5-6 mm.

Venation: R_2 and $r-m$ in transverse alignment; both R_{2+3} and the basal section of R_{4+5} elongate and subequal, almost one-half the length of R_s and longer than R_{1+2} alone. In typical *fumicosta*, R_{2+3} is less than one-third the length of R_s , usually only about one-quarter.

Holotype, ♂, Borburata, Estado Carabobo, altitude 500 meters, March 15, 1940 (*Anduze*). *Paratopotype*, ♂.

Teucholabis (Teucholabis) spinigera Schiner.

1868. *Teucholabis spinigera* Schiner; Novara Reise, Dipt., p. 44 (type from Venezuela, Lindig 1864; not Colombia, as stated).

1927. *Teucholabis (Teucholabis) spinigera* Alexander; Encycl. Entomol., Diptera, 4: 24-25 (redescription of holotype specimen).

Borburata, Estado Carabobo, altitude 500 meters, March 15, 1940 (*Anduze*).

San Esteban, Estado Carabobo, December 25, 1939- January 6, 1940 (*Anduze*).

The female is much smaller than the male, as is common in this genus and a very few others within the family Tipulidae.

Gonomyia (Lipophleps) neofalcifer sp. n.

Belongs to the *cinerea* group, allied to *falcifer*; male hypopygium with the outer dististyle unequally bifurcate, the inner arm spinous, only about one-half the length of the stem; stem of outer dististyle with a small spine or tooth; inner dististyle bispinous, with a further small triangular blackened point at base of style.

Male.—Length about 4.5 mm.; wing about 3.9 mm.

Rostrum and palpi dark brown. Antennae with basal segments yellow, the scape infuscated beneath; outer flagellar segments passing into dark brown. Head obscure yellow, the center of vertex extensively darkened.

Pronotum darkened medially, light sulphur-yellow on sides; pretergites sulphur-yellow. Mesonotal praescutum dark gray with two brown intermediate stripes, the lateral stripes broader but only vaguely indicated; pseudosutural foveae brownish black; scutal lobes dark brown; scutellum obscure yellow, extensively dark brown medially at base; postnotum obscure reddish, sparsely pruinose, the cephalic portion of

mediotergite darkened. Pleura dark brown, with a conspicuous yellow longitudinal stripe extending from the fore coxae to base of abdomen, passing beneath root of halteres; dorso-pleural region light brown. Halteres with stem yellow, knob infuscated. Legs with the coxae pale, the fore and middle pairs restrictedly darkened basally; trochanters yellow; femora yellow, with a narrow, pale brown, subterminal ring (fore legs broken); tibiae pale yellow, the tips conspicuously brownish black; tarsi black, the proximal ends of basitarsi a trifle paler. Wings brownish gray, the prearcular and costal fields conspicuously whitened, as in the group; stigma small, medium brown; a vaguely indicated dark seam on cord, chiefly evident as a deepening in the color of the veins; veins pale brown, yellow in the whitened areas. Venation: *Rs* very short,, only a little longer than *r-m*; cell 1st M_2 open by atrophy of basal section of M_3 .

Abdomen dark brown, the posterior borders of the segments narrowly but conspicuously pale, these brightened areas more or less bilobed by a median encroachment of the dark basal areas; segments seven and eight more uniformly darkened; basistyles dark on outer faces, the inner portions yellow. Male hypopygium with the outer dististyle conspicuously forked, the branches unequal, the outer one elongate, approximately twice the length of the stem, the margin with microscopic teeth; inner arm more acutely pointed, only about one-half the length of stem, very vaguely toothed; inner edge of stem at near midlength with a microscopic spine or tooth. Inner dististyle with a broad-based yellow lobe that terminates in two slightly unequal black spines; a further small triangular black point at base of style.

Holotype, ♂, Akuriman, (Gran Sabana), Estado Bolivar, altitude 900 meters, October 19, 1940 (*Anduze*).

The only other described species of the *cinerea* group having bispinous inner dististyles are *Gonomyia* (*Lipophleps*) *falcifer* Alexander, of Amazonian Peru, and *G. (L.) subfalcifer* Alexander, of Paraguay. These differ especially in the details of structure of the male hypopygium, especially of the inner dististyle.

Erioptera (Erioptera) celestis Alexander.

1940. *Erioptera (Erioptera) celestis* Alexander; Ann. Mag. Nat. Hist., (11) 5: 294-296 (Ecuador).

Known hitherto only from Ecuador. Borburata, Estado Carabobo, altitude 500 meters, March 15, 1940 (*Anduze*).

RESUMEN

Inicia el Prof. Alexander una serie de trabajos sobre los Tipulidos nuevos o poco conocidos de la fauna venezolana. Describe a las especies nuevas: *Tanypremna (Tanypremnella) gentilis* Alexander de la Gran Sabana; *Tipula olssoniana* Alexander del Páramo de Mucuchíes; *Limonia (Geranomyia) vindicta* Alexander del río Chacaito en el E. Miranda; *Gonomyia (Lipophleps) neofalcifer* Alexander de la Gran Sabana y establece como nuevos records en Venezuela: *Limonia (Geranomyia) cinereinota* Alexander de San Esteban, E. Carabobo y *Erioptera (Erioptera) celestis* Alexander de Borburata, E. Carabobo.

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ALGUNAS ABEJAS VENEZOLANAS
SOME VENEZUELAN BEES

by

Herbert F. Schwarz,

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The following paper is based on bees collected by P. J. Anduze and kindly submitted to me for identification.

Bombus (Bombus) niger, Franklin.

A series of 18 workers and one male from Tabay, E. Mérida, 1760 meters, September 1942.

Bombus (Bombias) robustus, F. Smith.

Three workers from Apartaderos, E. Mérida, 3320 meters, September 1942.

Trigona (Paratrigona) opaca variety *anduzei*, new variety.

Worker: Structurally like typical *opaca* except that the malar space is somewhat longer (at its shortest, near the inner angle of the base of the mandible, about as long as the flagellum is wide), and the scutellum a little shorter than in typical *opaca* and the other varieties of *opaca*, although longer than in *lineata*, with which *opaca* has sometimes been confused. The new variety shares with other varieties of *opaca* the dense, almost lusterless tessellation, the paucity of erect hairs (which are silvery-gray except for the metatarsal brushes), and the presence of maculations on the otherwise black head, thorax, and legs, although such maculations are much more limited than in typical *opaca* or any of its varieties with the possible exception of *guatemalensis*.

The maculation that in the typical variety extends transversely close to the apex of the clypeus is in variety *anduzei* usually represented only by two widely sundered pale yellowish rectangular spots (one in each of the antero-lateral extremities of the clypeus) that are at right angles each to a similarly shaped and concolorous spot located just outside the lateral boundary of the clypeus; in addition, along the apex of the clypeus, are two small reddish spots⁽¹⁾. The stripe along the inner margin of the eye of somewhat variable length, but usually short, flanking as a rule only the middle region of the inner orbit. The supraclypeus fairly often immaculate but usually with two in-slanting small spots that form, in the rare instances in which they succeed in uniting above, an up-pointing arrowhead-like angle. The rest of the head coal-black, only the mandibles with a red stripe just before the four apical teeth. Especially to be noted are the coal-black antennae in contrast to the condition in typical *opaca* and its other varieties, in which the scape is invariably maculated in front and the flagellum sometimes reddish below.

The pale yellow maculations of the thorax consist of a transverse, medianly interrupted stripe over the posterior part of the pronotum; the tubercles; a stripe bordering the sides of the mesonotum to the base of the axillae; sometimes a small, often only specklike maculation on the axillae but in many instances (53 cases out of a total of 96 specimens examined) the axillae are wholly black⁽²⁾; a stripe rimming the posterior margin of the scutellum although it fails to join with the stripe along the sides of the mesonotum.

The maculation of the legs like those of typical *opaca* except that the maculations on the external face of the fore

(1) In a few exceptional cases out of the 96 specimens before me there is also a small yellow maculation pyramided just above the two red spots, but in the vast majority of specimens this yellow maculation is lacking. At the other extreme are a few specimens in which some or all of the maculations on or adjacent to the clypeus are lacking.

(2) One of the specimens out of the total of 96 on which this description is based lacks not only the maculation on the axillae but the stripe along the sides of the mesonotum as well, although the stripe rimming the posterior margin of the scutellum is present as are the stripe on the pronotum and the maculation on the tubercles. The head, too, in this specimen is undermaculated but the legs have the maculations usual for *anduzei*.

and middle tibiae, instead of being stripelike, are reduced to a basal spot. The stripe on the hind tibiae, on the other hand, extends, as in typical *opaca*, along the posterior margin of the joint from the base almost to the apex.

Wings almost clear, with pitch-black venation and stigma. The transverse cubital veins exceptionally strong for a stingless bee, comparable, or almost comparable, in the depth of their chitinization with the marginal vein. The tegulae and root of the wing black without pale maculations. The number of hamuli in 176 out of 180 lower wings examined were 5, in the remaining instances 4.

Abdomen, as in typical *opaca* and the other varieties of *opaca*, immaculate.

More robust than typical *opaca* or any of the other varieties of *opaca*. Length $3\frac{3}{4}$ to $4\frac{1}{2}$ mm.; width of thorax almost 2 mm.; length of forewing, including tegula, about 5 mm.

Type: a worker in the collection of the Instituto de Higiene in Caracas. *Paratypes* in that institution and in the American Museum of Natural History, New York. Ninety-six specimens in all.

Type locality: Tabay, E. Mérida, 1760 meters, September 1942. Queen and male unknown.

It is with some misgiving that this bee is made a variety of *opaca*. As the description indicates, it departs in more than one respect — notably in the greater length of its malar space and in its slightly shorter scutellum — from the typical variety of *opaca*. However, it approximates at least in its slightly longer malar space, such varieties of *opaca* as *guatemalensis* and *ornaticeps*, and in so many other respects it tends to link up with members of the *opaca* group that, tentatively at least, it seems best to retain it in that assemblage. Possibly the discovery of the as yet unknown male of *anduzei* may ultimately clarify its relationship more completely. If it has its correct place in the *opaca* complex, it is not only the most robust but also the most melanistic member of that group.

It differs from all the other varieties of *opaca* in having wholly black antennae—scape as well as flagellum—and either wholly black or very much undermaculated axillae. By these characters it is readily separated from *guatemalensis* and also by the fact that the stripe on its hind tibiae extends almost to the apex whereas in *guatemalensis* the corresponding maculation has shrunk to a basal spot.

Euglossa cordata (Linnaeus)

One female and one male from Tabay, E. Mérida, 1760 meters, September 1942.

Megachile candida F. Smith.

One female from Tabay, E. Mérida, 1760 meters, September 1942.

Ceratina maculifrons F. Smith.

One female from Tabay, E. Mérida, 1760 meters, September 1942.

The present specimen accords with Schrottky's interpretation of *maculifrons* as published in Zeitsch. f. Hymenop. u. Dipter., 1907, VII, pp. 477-479.

Ceratina minima Friese.

One male and two females from Tabay, E. Mérida, 1760 meters, September 1942.

This form would seem to be very close to *oxalidis* Schrottky, *muelleri* Friese, and *manni* Cockerell. Ducke (1910 Revue d'Entomologie, Caen, XXVIII, p. 83) made both *oxalidis* and *muelleri* synonyms of *lucidula* Smith, stating that "This species is extraordinarily variable in stature, color (bright metallic or black) and the maculations of the head, which are abundant or almost completely absent; in the rich material before me are all possible transitions between the different

forms". Cockerell (1912, Psyche, XIX, p. 47), however, disputes Ducke's conclusions, claimings distinctions between at least *muelleri*, his own *manni*, and *lucidula*.

Whether all these forms, and others that in my estimation belong to the same complex, can be marged or made varieties of a single species seems doubtful. Thus, in addition to differences of stature, coloration, and maculation there are also some departures from the standard even in structure. In this complex belongs, I think, *minima*. The male of *minima*, if one may judge from Friese's description as well as from the specimen before me, lacks armature on the apex of tergite 7 of the abdomen, which is the case also in the male of *oxalidis*. Yet the male of *aenescens* Friese, which almost certainly belongs in this aggregate of very closely related forms, has tergite 7 "ending in a single spine" and such armature is indicated also for *zebra* Friese, while in the male of *buscki* Cockerell there is in this area a not strongly salient angulation.

Cockerell's confidence that his *manni* was not the female of *minima* receives *support* from the two females collected at Tabay, provided these area correctly associated with the male of *minima*. They are considerably larger than the male — $4\frac{1}{2}$ to 5 mm. — and their ivory-colored maculations are limited to a large perpendicular spot on the clypeus, the tubercles, and a stripe extending from the base about half-way down the outer face of the fore tibiae. The apical half of the mandibles, the flagellum beneath, the tubercles, and the tarsal joints beyond the metatarsus are more or less reddish. With the exception or these maculations the females, like the male, are of so deep a metallic hue that they seem to verge on black.

Certainly these putative females of *minima* resemble *manni* less than *manni*, judging from the descriptions, resembles *muelleri*. They are, however, very close to the female of *oxalidis* but with the labrum and basal half of the mandibles black, not brown.

Ceratina muelleri Friese

Three females collected by H. F. Schwarz on the Island of Trinidad, W. I., August 24, 1934.

The variety *minima* was described from Trinidad on the basis of the male. The present females from that island accord, however, with the description of the variety *muelleri*.

Ceratina buscki Cockerell.

Three females and five males from Tabay, E. Mérida, 1760 meters, September, 1942.

Cockerell (1920, Proc. N. S. Nat. Mus., LV, pp. 176-177) described this species on the basis of males from Taboga Island, Panama. The female has not hitherto been described.

Female: Brilliant green, with an ivory-colored T-shaped maculation on the clypeus that in two of the three specimens has the narrow perpendicular arm extending from the base of the clypeus to the apex, and the narrow transverse arm extending the complete width of the clypeus along the apex. In the third specimen the maculations is much reduced. In contrast to the condition in the male, the labrum has only a much reduced and somewhat reddish maculation or is wholly black and the sharply defined ivory-colored maculation at the base of the mandibles in the male is replaced in the female by a faded and cloudy red area that extends, however, far toward the briefly black apex. The sides of the face lack the small cuneiform maculations of the male. The flagellum much shorter than in the male, the scape longer, but the antennae in their backward extension not attaining the scutellum (as do those of the male). All the femora metallic green posteriorly but the front and middle femora black anteriorly as are the middle and hind tibiae over their entire surface. The fore tibiae red with an ivory-colored stripe; the tarsal joints red. The abdomen with the tergites black basally but widely metallic green apically, the last segment with an angulation at the middle of the apex.

The sculpturing, as in the male, with the sides of the face upward from the level of the base of the antennae, the genae, much of the mesonotum, and the first abdominal tergite punctureless (or nearly so) and highly polished. The hairs silvery-gray, sparse except on the sides of the thorax, scute-

llum, abdomen beneath, and the femora, tibiae, and metatarsi of the hind leg, being especially long and dense on these leg areas.

Length greater than that of the accompanying males, about $5\frac{1}{2}$ mm.

In addition to these *Ceratina* there has been reported from Venezuela also at least *Ceratina laeta* Spinoza, which was collected at Sierra Parima (Friese, 1916, Stettiner Entom. Zeit., LXXVII, pp. 322-323).

Xylocopa brasillianorum (Linnaeus)

Two females from Tabay, E. Mérida, 1760 meters, September 1942.

In addition to *brasillianorum*, which has been reported several times from Venezuela, the following *Xylocopa* have been recorded from that country.

Xylocopa barbața Fabricius.

Maidl, 1912, Annalen Naturh. Hofmus., Vienna, XXVI, p. 324.

Enderlein, 1913, Archiv f. Naturg., LXXIX, Abt. A, Heft 2, p. 166.

Dusmet y Alonso, 1924, Trabajos Museo Nac. Ciencias Natur., Serie Zool., Num. 49, pp. 45-46.

Xylocopa electa Smith.

Smith, 1874, Trans. Ent. Soc. London, pp. 293-294. (*Type locality*: Venezuela).

Schrottky, 1902, Revista Museu Paulista, V, p. 472.

Xylocopa fimbriata Fabricius.

Taschenberg, 1879, Zeitsch. Gesamnten Naturw., IV, p. 570.

Schrottky, 1902, Revista Museu Paulista, V, p. 464.

Maidl, 1912, Annalen Naturh. Hofmus., Vienna, XXVI, p. 311.

Enderlein, 1913, Archiv. f. Naturg., LXXIX, Abt. A, Heft 2, p. 159.

Xylocopa frontalis (Olivier)

Smith, 1874, Trans. Ent. Soc. London, p. 284.

Schrottky, 1902, Revista Museu Paulista, V, pp. 462-463.

Strand, 1910, Zool. Jahrb. Syst. Geogr. u. Biol., XXIX, pp. 500-501.

Maidl, 1912, Annalen Naturh. Hofmus., Vienna, XXVI, pp. 311-312.

Xylocopa frontalis var. *morio* (Fabricius).

Schrottky, 1902, Revista Museu Paulista, V, p. 463.

Xylocopa mastrucata Pérez.

Pérez, 1901, Actes Soc. Linnéenne Bordeaux, LVI, (6 Série, VI), pp. 85-86. (*Type locality*: Huagamba, Venezuela).

Enderlein, 1913, Archiv. f. Naturg., LXXIX, Abt. A, Heft 2, pp. 161-162.

Xylocopa transitoria Pérez.

Pérez, 1901, Actes Soc. Linnéenne Bordeaux, LVI, (6 Série, VI), pp. 95-97. (*Type locality* Mérida, Venezuela).

Cockerell, 1926, Annals and Mag. Nat. Hist., Series 9, XVII, p. 660. Cockerell expressed the opinion that Pérez type material, which in addition to the Mérida specimens included also examples from Argentina, was composite.

RESUMEN

Hace referencia el autor a diez y siete especies de abejas venezolanas, entre las cuales describe como variedad nueva a *Trigona* (*Paratrigona*) *opaca anduzei* Schwarz, referente a la cual dice el autor "es con alguna duda que considero esta abeja como variedad de *opaca*. Como lo indica la descripción, se diferencia en más de un detalle — sobre todo en la mayor longitud del espacio malar y en el escudete apenas un poco más corto — de la variedad típica de *opaca*. Posiblemente el descubrimiento del macho desconocido de *anduzei* puede aclarar su afinidad más completamente".

Hace la descripción de la hembra desconocida de *Ceratina buscki* Cockerell.

ALGUNOS MALLOPHAGA VENEZOLANOS
SOME VENEZUELAN MALLOPHAGA

by

E. Withrow Stafford,

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There follows a report on a collection of Mallophaga from Venezuela which was sent to me for determination in 1938 by Mr. Pablo Anduze.

All the specimens listed except as otherwise indicated were collected by Mr. Anduze himself.

An asterisk * will mark synonyms indicated as such so far as I know for the first time.

Thirty two species of Mallophaga are represented from twenty one species of hosts. Six new species together with *Menopon cracis* Giebel are described and figured.

All descriptions and measurements are from cleared and mounted specimens. In the bilateral figures most of the left side refers to dorsal characters and the median portion and right side to ventral characters.

Long bristles, conspicuous out of proportion to their taxonomic importance are shown as cut short to avoid confusion.

Paired structures are enumerated as for one side only.

MALLOPHAGA (order).

AMBLYCERA (suborder).

BOOPIDAE.

Heterodoxus Le Souëf and Bullen, Victoria Nat. XVIII, 159 (1902). Genotype: *Menopon longitarsus* Piaget.

Heterodoxus spiniger (Enderlein), Jenais. Denks. XIV, 80 (1909). Type host: *Canis familiaris*.

2 males, 1 female, from *Canis familiaris* (dog).

MENOPONIDAE

Austromenopon Bedford, Onderstepoort Jour. XII, 122 (1939). Genotype: *Menopon crocatum* Nitzsch.

Austromenopon leucoxanthum Nitzsch in Burmeister, Handb. d. Ent. II, 440 (1838). Type host: *Anas crecca*.

1 male, from *Dendrocygna viduata* (pato guire), Flores Moradas, Guarico. 18-11-38.

Menopon Nitzsch, Germars Mag. d. Ent. III, 299 (1818).

Genotype: *Pediculus gallinae* Linne.

Menopon cracis Giebel, Zeits. d. ges. Naturw. XXVIII 391 (1866). Type host: *Crax globosa*, *C. blumenbachii*.

(Synonym- *Menopon macropus* Giebel, Insecta Epizoa, p. 294, 1874).

Giebel's description without figure and his measurements evidently refer to immature specimens. They correspond to nymphs in this lot. It is considered desirable to describe and figure the adult. (Plaque I).

Female (f. 5): Body length 2.25 mm., Head; length .44 mm., width .69 mm.

General color white with a tinge of brown i. e. white dilutely infumated, the various structures, depending upon their degree of sclerotization, are of shades from brown to black. Tip of right mandible, ocular blotch, ventral tentaculum of head and pleura black.

Head: (f. 1) Clypeus laterally sclerotized, clypeo-frontal suture laterally visible. Pre-ocular slit deep, with sclerotized margins. No ocular emargination. Eyes two, distinct, the posterior eye subdivided. Occipital suture distinct. No occipital bands. Oesophageal sclerite (salivarium) well developed, rotund behind, its glands and ducts present. Labial palpus beneath mandible. Gula distinct, anteriorly flanked by a sub-circular clear space. Maxillary palpus with ultimate segment more than twice its width, projecting. Antenna (f. 2) with infundibular (3rd or 3rd and 4th) segment subdivided, ultimate segment subcylindrical, projecting. Thorax: Sternum 1 acuminate behind. Its lateral apophysis ("clavicle") mostly free of coxa 1. Coxa 1 with a lateral protuberance before the trochanter. Mesonotum distinct, narrow. Metathorax with posterior margin slightly rounded. Abdomen: Tergite 1 produced backward, dividing tergites 2 and 3 medianly and leaving them represented only by small lateral tergal plates, spiracles present on tergites 2-8 inclusive, minute on 2. Ninth tergite ends angularly. Abdomen: Pleura dark, conspicuous. Pendant structures (f. 6) or sacklike appendages are developed from the drawn-out ventral portions of the pleura or segments 1-5. Lateral apodemes (f. 4), each with a dorsal and ventral lobe, arise from anterior, internal face of pleura 6-8. A lobe (f. 8) arises from the lateral portion of 6th sternite and overlies the 7th.

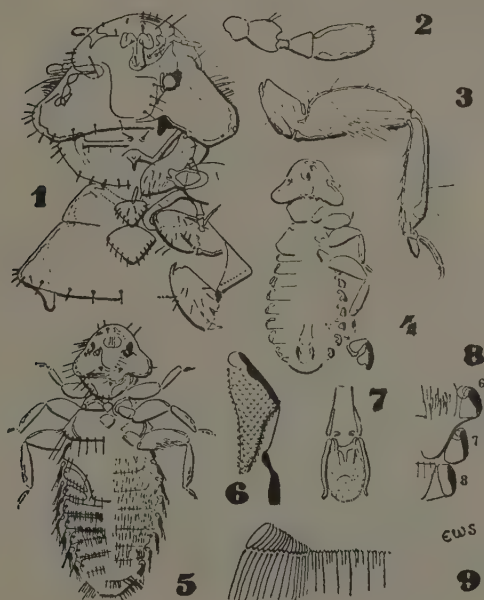
Chaetotaxy. — Head: (f. 1). On clypeus, 4-6 minute, scattered setulae. On dorsum, before mesal limit of slit a seta. On margin before the slit, 4 setae of which 2nd very long, others short. Near posterior eye, a small seta laterad, another mesad. Temporal setae, 4 long, interspersed with setulae. On occipital margin, 4 long setae. On fore margin of epipharynx which is before the mandible, 3 short setae. Under labium, 1 seta. Laterad of oesophageal sclerite 2 setae, 2 setulae. On subfossal margin, flanking an anterior, slight emargination, 2 setae; further back a palisade of close-set setulae. On gular lateral margin, 4 setae, the posterior ones longer. Prothorax: On dorsum, in line with the straight, transverse phragma, a lateral setula, another much smaller mesad. At anterior angle,

one long, between 2 short setae. On posterior margin, 4-5 setae of which the innermost is slender. On lateral process of coxa 1, a seta. On a small, presternal, submedian sclerotization, a setulae. Pterothorax: On mesothorax, a dorsal setula. On metathorax at posterior angle, 3 spinose setulae; on posterior margin, 5 long setae. Meso- and metasternal setae long. On venter of femur 3 (f. 3) a patch of setae. Abdomen (f. 5): Tergites with a single, transverse, posterior row of setae, on Tg. 4, 21 setae of which the outermost, behind the spiracle, is very long. Pleura with a posterior fringe of long setae. Each sternite with 2 irregular, transverse rows of approximately 12 setae in each. Those setae on sides reduced in size, increased in numbers and condensed in position to form the lateral patches on segments 4-6. Terminal fringe in female (f. 9) consists of a wide, depressed crown of setae directed posteriorly. The ventral and dorsal portions of the fringe arise from the 10th sternite and tergite respectively and are in general similar except that the tergal, seta-bearing margin extends farther backward than the sternal margin. In each margin the median part is fringed with 4-5 sessil, moderately long setae irregularly alternating with 1-3 fine, short setulae. The lateral part of fringe composed of uniformly long setae, each rising from the apex of a flattened scale-like appendage.

Male (f. 4). Body length 1.80 mm., Head; length .40 mm., width .61 mm. Similar in general to female, paler, only tip of mandible and tentaculum black, smaller, head proportionately wider. Sacklike appendages on pleura 1-4. Distinct, conspicuous pleural apodemes in segments 3-8 (f. 4). No lobe on 7th sternite as in a female. Genitalia as in f. 7.

2 males, 3 females, 5 nymphs, from *Crax nigra* (paujil) San Felipe, E. Yaracuy, 16 v 38.

Type female and allotype male in the collection of the author, Paratypes to be deposited in the collection of the Instituto Nacional de Higiene at Caracas, Venezuela.



Plaque I (ff. 1-9) *Menopon cracis* Giebel.

1. Female, anterior portion.
2. Antenna.
3. Hind leg, ventral.
4. Male, total, also pleuron, 6th. segment.
5. Female, total.
6. Sack-like abdominal pleural appendage.
7. Male genital armature.
8. Abdominal lateral lobe female from 6th. over 7th.
9. Female, terminal fringe, ventral, left side.

Menacanthus Neuman, Arch. de Parasitol. XV, 353 (1912).
Genotype: *Menopon robustum* Kellog.

Menacanthus ortalidis (Carriker), Nebraska Univ. Stud. III,
p. 179, pl. 7, f. 1 (1903). Type host: *Ortalis garrula cine-*
reiceps.

4 males, 5 females, 1 nymph, from *Crax nigra* (paujil), San Felipe, E. Yaracuy, 16 v 38.

Myrsidea Waterston, Ent. Mo. Mag. p. 12 (1915). Genotype: *victrix* Waterst.

Myrsidea rustica (Nitzsch in Giebel), Insecta Epizoa p. 288 (1874). Type host: *Hirundo rustica*.

Synonyms * *Menop. dissimile* Kellog, Calif. Acad. Sci., Proc. VI, p. 536, Pl. 73, f. 5 (1896). Type host: *Progne subis*.

* *Menop. latifrons* Carriker and Shull, Ent. News XXI, p. 56, Pl. 5, f. 4 (1910). Type host: *Riparia riparia*.

5 males, 6 females, from a hirundinid bird (golondrina), San Felipe, E. Yaracuy, 17 v 38.

Myrsidea diffusa Kellog, Calif. Acad. Sci., Occas. Papers VI, p. 40, Pl. 4, f. 3 & 4 (1899). Type hosts: many, varied and unrelated birds from Panama.

Synonyms * *Menop. fuscomarginatum* Osborn, U. S. Dept. Agric., Div. Ent., Bull. V, p. 245 (1896). Type host: *Turdus minor*.

* *Myr. bonariensis* Malcomson, Ent. Soc. Amer., Annals XXII, p. 728, f. (1929). Type host: *Molothrus bonariensis*.

5 males, 8 females, from *Amazona ochrocephala*, Urama, E. Carabobo, 23 iii 38.

Myrsidea incerta Kellog, Calif. Acad. Sci., Proc. VI, p. 533, Pl. 73, f. 2 (1896). Type host: *Spinus tristis* and *Turdus ustulatus*.

1 male, from *Richmondia phoenicia* (cardinal), Maracaibo, E. Zulia, 4 iv 38.

1 female, from *Mimus gilvus melanoptera* (paraulata), Colonia Tovar, E. Aragua, 1900 mts. Enero 1939, Edgardo Mondolfi.

Myrsidea mirabile (Carriker), Nebraska Univ., Stud. III, p. 175, Pl. 6, f. 5 (1903). Type host: *Zarhynchus w. wagleri*. 2 males, 3 females, 1 nymph, from *Cacicus c. cela* (arrendajo), San Felipe, E. Yaracuy, 18 v 38.

Myrsidea magnidens n. sp.

Male, Plaque II, (f. 14): Body length 1.35 mm.; Head; length .34 mm., width .47 mm.

General color an almost uniform brown. Sclerotized parts not contrasting. Tip of right mandible and ocular pigment black.

Head (f. 10): Clypeus laterally sclerotized, clypeo-frontal suture laterally evident. No pre-ocular slit. Eyes two. No ocular emargination. Epipharynx, and the mandibles immediately behind it, are unusually far back from the anterior rim of the head. Oesophagial sclerite well developed, rotund behind and with paired glands and ducts. Antenna (f. 11) characteristic. Prothorax (f. 10): Prosternum posteriorly alate within the thorax. Mesepisterna fused ventrally on mid-line. Mesosternum absent. Metathorax has posterior margin almost straight. Genitalia as in f. 15.

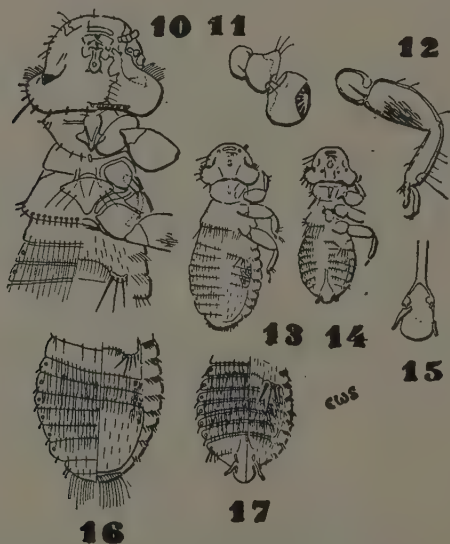
Chaetotaxy. — Femur 3 (f. 12); the ventral patch with posterior setae, those along flexor margin, larger than the rest. Each abdominal tergite (f. 17) with a single, posterior, transverse row of 16-18 long, close-set setae. Aster, especially in the male, unusually large for the genus. Each sternite with a posterior, transverse row of 8-18 setae and a few additional ones scattered over elsewhere. The lateral setae condensed into compact lateral patches on sternites 4-6.

Female (f. 13): Body length 1.57 mm., Head; length .36 mm., width .53 mm. Similar in general to male but larger; head proportionally shorter; metanotum with straight posterior border as in the male; aster smaller. Each tergite (f. 16) with a single row of 12-18 setae. The terminal fringe is a continuous crown of setae; the ventral setae a little shorter than the dorsal, all sub-uniform, all of same kind, none set on apex of flat appendages, no alternation in size.

This species has not the conspicuous, contrasting colors characteristic of *Myrsidea diffusa* Kellog and a group of related species. It is nearest to *Myrsidea incerta* Kellog differing from it in many details but especially in the very large asters on second abdominal sternite in this species and in the extreme number of setae on the abdominal rows.

Type male and allotype female in the collection of the author. Paratypes to be deposited in collection of the Instituto Nacional de Higiene at Caracas, Venezuela.

2 males, 2 females, 1 nymph from *Pitangus sulfuratus rufipennis* (crisofué), La Caimana, E. Guárico, 12 ii 38.



Plaque II (ff. 10-17) *Myrsidea magnidens* n. sp.

20. Male, anterior portion.
21. Antenna.
22. Hind leg, ventral.
23. Female, total.
24. Male, total.
25. Male, genital armature.
26. Female, abdomen.
27. Male, abdomen.

Eureum Nitzsch, Germars Mag. d. Ent. III, 301 (1818).

Genotype: *cimicoides* Nitzsch.

Eureum cimicoides, Nitzsch in Burmeister, Handb. d. Ent. II, p. 441 (1838). Type host: *Micropus apus*.

1 female, from hirundinid bird (golondrina, California swift). Rancho Grande, E. Aragua, Dic. 1937.

Trinoton Nitzsch, Germars Mag. d. Ent. III, p. 300 (1818).

Genotype: *conspurcatum* Nitzsch a synonym of *Pediculus anserinus* Fabricius.

Trinoton aculeatum Piaget, Les Pediculines, Supplement p. 136, Pl. 15, f.l. (1885). Type host: *Dendrocynna viduata*.

1 female, from *Dendrocynna viduata* (Pato guire), Flores Moradas, Guarico, 18 ii 38.

Colpocephalum Nitzsch, Germars Mag. d. Ent. III, p. 298 (1818).

Genotype: *zebra* Nitzsch.

Colpocephalum burmeisteri Kellogg, New York Ent. Soc. Jour. XIV, p. 48, Pl. 2, f. 5 (1906). Type host: *Ara chloroptera*.

1 male, from *Amazona ochrocephala*, Urama, E. Carabobo, 25 iii 38.

Colpocephalum sp.

1 male, from *Amazona ochrocephala*, Urama, E. Carabobo, 25 iii 38.

Colpocephalum anduzei n. sp.

Female (f. 26): Body length 2.47 mm., Head; length .42 mm., width .44 mm.

General color white diluted with brown. Various structures, depending upon degree of sclerotization, range in shades through brown to black. Right mandible at tip, ocular blotche, posterior ventral tentaculum of head black. Tergal and sternal bands coincide, sternal darker. Segments 3-6 inclusive appear as brown bands with clear spaces between. Margin of sternites 7-8 straight, converging, and bearing a conspicuous palisade of upcurved setae.

Head (f. 18): Clypeus laterally sclerotized, clypeo-frontal suture laterally evident. Pre-ocular slit deep with sclerotized margins. Ocular emargination (deep, angular, conspicuous notch as in *Colpocephalum zebra* i. e. *Colpocephali* sensu strictu) absent. A small, distinct, shallow angular emargination is present at mouth of pre-ocular slit. A slight concavity in head-margin at clypeal sclerotization. Eyes two, the anterior vestigial. Occipital suture evident behind. Occipital bands (and the typical blackened pattern characteristic of *Colpocephali* s.s.) absent. Oesophagial sclerite well developed, rotund behind, its glands and ducts (f. 20) present. Labial palpus (f. 20) projects beyond the mandible. Antenna (f. 19); infundibular segment (3rd, 3rd and 4th) subdivided. Subfossal margin with an anterior, distinct, deep, rectangular notch. Gula short, faint. Prothorax: Prosternum horseshoe-shaped, its lateral apophysis partly underlying coxa 1. Abdomen: Spiracles on lateral margins of tergites 2-8, on 2 vestigial. Ninth tergite (f. 27) bilobed medianly. Tergite 10 clearly defined, sclerotized. Sternites 7-8 with rather straight, convergent sides. A specimen mounted on its side (f. 28) under pressure shows the relation of structures at terminus of female abdomen in *Colpocephali* s.s., to which this species is related.

Chaetotaxy. — Head (f. 18): On clypeus in submedian region a reclinate and a divergent seta and in anterior-lateral region 2 short setae between 2 setulae. In paraclypeal region 1 short seta. On dorsum, before the pre-ocular slit, 2 closely approximated bristles, farther mesad, another. Marginal before the slit, 4 bristles of which first 2 approximate, 2nd and 4th long. Mesad of eye, a setula. Temporal setae, 3 long, several short. Foreward of the lateral occipital margin is a long, unusually slender seta. On occipital margin the conspicuous setae usually present are here reduced to two pustulated setulae. At sides of epipharynx, 3 short setae. At side of oesophagial sclerite, 2 setae. On subfossal margin, 2 conspicuous setae, divergent inter se, flanking the rectangular notch, and followed by another similar, then a comb of close-set setulae. Under temporal margin a group of about 10 slender setae. In preular region 2 submedian, moderately short setae follow-

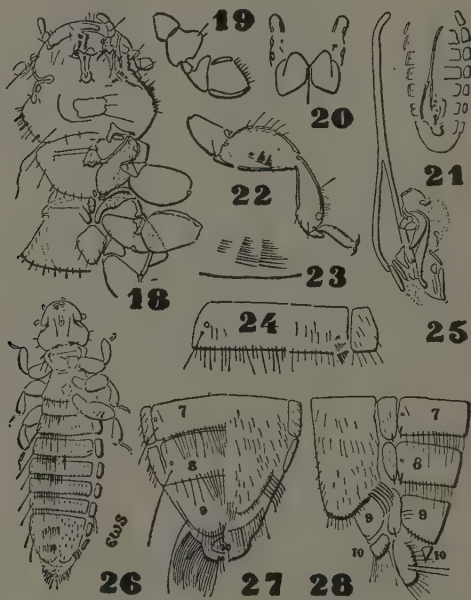
ed on gular lateral margin by 2 longer setae. Prothorax: On dorsum, laterad, at level of the straight transverse phragma, a setula. At angle, a short, followed by 2 long setae. On posterior margin 3 long setae with short setae between, a pre-sternal, submedian setula followed by a sub-median short seta. On coxal posterior margin 2 setae, and on anterior portion a seta with 2 setulae mesad. Pterothorax: On dorsum of mesothorax a lateromedian setula. Metathorax, at angles 2 short setae, along the side 8-10 more, and on posterior margin laterad 5 long setae alternating with short ones. Sub-median margin bare. Femur 3 (f. 22) with three combs of setulae (f. 23). Abdomen: Each tergite (f. 24) with a single, posterior, marginal row of about 20 setae, irregularly alternate between one long, reaching almost to the next row and 1, 2, or 3 half as long. On sternite 3 (f. 24) are 3 combs of 7, 15 and 11 setulae diminishing laterad. Such combs apparently are derived from the reduction in size, increase in number and lining up of normal setae on latera of this sternite. Sternites other than 3rd with two transverse rows of 10-12 setae. Sternite 8 (f. 27) with a palisade of 6-8 conspicuous upcurved setae. Female terminal fringe (ff. 27 and 28) consists of dorsal and ventral fringes born on the posterior margins of 10th tergite and sternite respectively. In ventral fringe long and short hairs alternate irregularly as- 1 coarse long, with 1-4 shorter finer hairs. The dorsal fringe with a sub-median brush of 3-4 bristles crowded together and beyond this subuniform hairs to the lateral margin.

Male: Body length 2.25 mm., Head; length .41 mm., width .41 mm. Similar in general to female. Smaller. Abdomen (f. 21) rounded behind. Segments 3-7 forming distinct bands. Genitalia (f. 25) much compressed, the massive, terminal complex of structures lies on its side within the abdomen and directed to the left side, thus appearing to be asymmetrical.

This species resembles no other species nor group that I know of. Its characters- absence of blackened occipital bands and ocular emarginations, presence of pre-ocular slit and sexual dimorphism in the abdomen place it near Bedford's genus *Psittacomenopon* from parrots. However, the narrow head, entire tergal plates and asymmetrically disposed male genital armature exclude it from that genus.

16 males, 17 females, 13 nymphs from *Aratinga pertinax* (perico cara sucia), San Felipe, E. Yaracuy, 18 v 38.

Named for Mr. Pablo Anduze whose enthusiasm and deep interest in the entomological fauna of his native land motivated the collection of the specimens.



Plaque III (ff. 18-28) *Colpocephalum anduzei* n. sp.

18. Female, anterior portion.
19. Antenna.
20. Salivary glands and labial palpi.
21. Male abdomen, outline, genital armature in situ.
22. Hind leg, ventral.
23. Femoral combs.
24. Third abdominal segment.
25. Male genital armature.
26. Female, total.
27. Abdominal extremity, female, dorsal-ventral.
28. Abdominal extremity, female, lateral (under compression).

Colpocephalum crotophagae n. sp.

Female (f. 34): Body length 2.02 mm., Head; length. .38 mm., width .63 mm.

General color pale brown but much of the body with deeper rich brown markins. Abdomen conspicuously banded. Apex of right mandible, ocular blotches and ventral tentaculum of head, black. Temples and occiput with conspicuous light colored pustules.

Head (f. 29): Clypeus with lateral sclerotization. No pre-ocular slit. Ocular emargination small, distinct, obscured by the subfossal head-margin. Eyes 2, distinct, separated. Oesophageal sclerite not developed, the often-present, subglobular, posterior structure, the paired glands and their ducts are absent. The supporting structure is present and the symmetrical, paired, clear posterior openings conspicuous. Antennal infundibular segment (f. 30) (3rd or 3rd and 4th) is entire. Gula with an anterior lateral appendage and farther laterad a translucent slit. Subfossal margin with a very shallow emargination cephalad. Prothorax: Prosternum horsesho-shaped, its lateral apophysis ("clavicle") completely free of coxa 1.

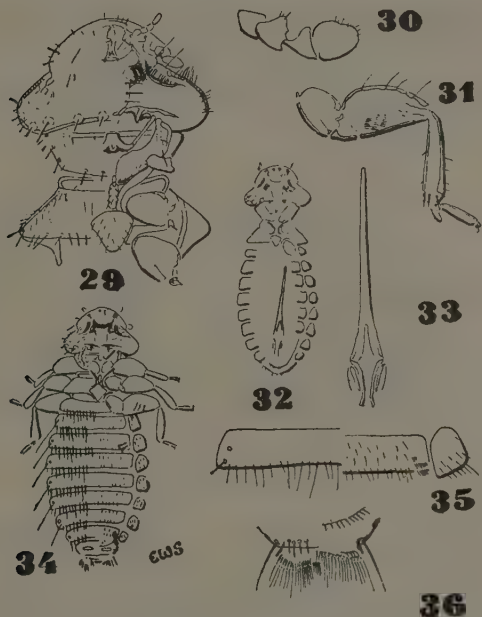
Chaetotaxy. — Head: In clypeal region, dorsal, on anterior margin a submedian, porrect setula, cuudad, 3 more. On pre-ocular margin 4 setae, 1st and 3rd short, 2nd and 4th long. Posterior eye with a setula mesad. On temple 3 long setae, the hinder 2 with large pustules. In occipital region a lateral, premarginal, pustulated, along, hairlike seta. On epipharynx 3 lateral setae. Laterad of oesophageal structure 2 setae. On gular lateral margin 4 setae, the posterior, larger. On subfossal margin 2 conspicuous setae, subparallel inter se, flanking subantennal emargination and followed by 6-10 marginal setulae. Temples with a few fine hair-like setae on anterior portion, below. Prothorax: On dorsum, at level of straight, transverse phragma, a lateral setula, another smaller mesad. At anterior angle a long seta with a short one before and behind it. At posterior angle a long seta, a short seta mesad. On posterior margin 3 long setae. A presternal, sub-

median sttula. On coxal posterior margin 2 setae, before the trochanter a lateral seta. Pterothorax: Mesothorax with a dorsal setula. Metathorax with 2 dorsal anterior setae, the inner longer; on lateral margin 6 short setae; on posterior margin 9-10 setae, alternately long and short. On venter of femur 3 (f. 31), three combs of 8, 12 and 8 setulae diminishing anteriorly. Abdomen (f. 35): Tergites with single, marginal row of 12-13 setae. Sternites with scattered setae on surface and one row on margin. Third sternite with three lateral combs of 3, 12 and 14 setulae diminishing laterad. Female terminal fringe (f. 36) consists of a flat crown of setae directed backward and borne on posterior margin of last tergite and sternite, the tergal margin reaching farther caudad. Mid-dorsally a dozen close-set minute setulae, mid-ventrally some longer setae alternated with more numerous shorter ones, laterally, both dorsal and ventral, with uniformly long setae born on apices of flat, tapering appendages of the seta-bearing margin.

Male (f. 32): Body length 1.71 mm., Head; length .35 mm., width .55 mm. In general similar to female. Head proportionally broader. Genitalia (f. 32 and 33) very long and slender.

This species is closely related to *Colpocephalum decimfasciatum* Boisduval and Lacordaire (synonym *C. laticeps* Kellogg) from herons. In both, the ocular emargination is small but distinct and withdrawn within the subfossal head-margin and in both there is no pre-ocular slit. They differ in certain characteristics, particularly in that *decimfasciatum* has the oesophagial sclerite well developed and rotund behind and *crotophagae* has it undeveloped. If *C. guiraense* Kellogg from Guira guira comes in the same subgeneric group, it should be related to but evidently distinct from *crotophagae* as evidenced by its larger size.

4 males, 10 females, 1 nymph from *Crotophaga ani*, San Felipe, E. Yaracuy, 18 v 38. Type male and allotype female in collection of the author, Paratype to be deposited in the collection of the Instituto Nacional de Higiene at Caracas, Venezuela.



Plaque IV (ff. 29-36) *Colpocephalum crotophagae* n. sp.

- 29. Female, anterior portion.
- 30. Antenna.
- 31. Hind leg, ventral.
- 32. Male, total, outline.
- 33. Male genital armature.
- 34. Female, total.
- 35. Third abdominal segment.
- 36. Female abdomen, extremity.

Cuculiphilus Uchida, Tokyo Coll. Agric. Journ. IX, p. 47 (1926).
Genotype: *Pediculus fasciatus* Scopoli.

Cuculiphilus fasciatus (Scopoli), Ent. Carn. p. 383 (1763).
Type host: *Cuculus c. canorus*.

Synonyms * *Menopon decoratum* Kellogg., Calif. Acad. Sci.,
Proc. VI, p. 526, Pl. 72, f. 2 (1896). Type host:
Elanus leucurus (?straggler).

* *Menopon hirsutum* Carriker and Shull, Ent. News XXI, p. 55, Pl. 5, f. 3 (1910). Type host: *Dryobates pubescens* (? straggler).

2 males, 2 females, from Piaya c. cayana, Borburata, E. Carabobo, 24 xii 37.

ISCHNOCERA (suborder).

TRICHODECTIDAE.

Cebidicola Bedford, Onderstepoort Jour. VII, p. 52 (1936).

Genotype: *Trichodectes armatus* Neumann.

Cebidicola semiarmata (Neumann), Arch. de Parasitol. 1913, p. 611, f. 5 (1913). Type host: *Mycetes fuscus*.

1 female, from *Aluata ursina*, S. Fernando de Apure, 20 ii 38.

PHILOPTERIDAE

Philopterus Nitzsch, Germars Mag. d. Ent. III, p. 288 (1818).

Genotype: *Pediculus ocellatus* Scopoli.

Philopterus agelai (Osborn), U. S. Dept. Agric., Div. of Ent., Bull. Nº 5 (new series) p. 220 (1896). Type host: *Agelaius p. phoeniceus*.

2 females, from *Sturnella magna*, Colonia Tovar, Edo. Aragua, 1900 mts. Enero 1939, Edgardo Mondolfi.

Philopterus sp.

1 female, 2 nymphs, from *Amazona ochrocephala*, Urama, E. Carabobo, 23 iii 38.

Philopterus domesticus Kellogg, Calif. Acad. Sci., Proc. VI, p. 475, Pl. 65, f. 4 (1896). Type host: *Progne subis*.

3 males, from a hirundinid bird (golondrina), San Felipe, E. Yaracuy, 17 v 38.

Austrophilopterus Ewing, Man. Ext. Paras., p. 190 (1929).

Genotype: *Docophorus cancellosus* Carriker.

Austrophilopterus cancellosus (Carriker), Nebraska Univ., Studies III, p. 132, Pl. 1, f. 4 (1903). Type host: *Ramphastos swainsoni*.

2 males, 1 female, from *Aulacorhynchus s. sulcatus* (pico de frasco), Colonia Tovar, Edo. Aragua 1900 mts., Enero 1939, Edgardo Mondolfi.

Quadraticeps Clay, Ann. Mag. Nat. Hist. (11) IV, p. 458 (1939).
Genotype: *Nirmus vanelli* Denny.

Quadriceps signata (Piaget), Les Pediculines p. 186, Pl. 15, f. 8 (1880). Type host: *Recurvirostra avocetta*.

2 males, 2 females, from *Himantopus h. mexicanus* (stilt), Ocumare de la Costa, 15 i '38.

Bizarrifrons Eichler, Zool. Anz. CXXIV, p. 226 (1938).
Genotype: *Nirmus magus* Nitzsch.

Bizarrifrons sp.

2 immature females, from *Casicus c. cela*, San Felipe, 18 v '38.

Vernonia Guimerães, Univ. S. Paulo, Mus. Paulista, Revista XX, p. 221 (1936). Genotype: *Lipeureus macgregori* Kelloogg.

Vernonia macgregori (Kellogg), Calif. Acad. Sci., Occas. Papers VI, p. 33, Pl. 3, f. 5 and 6 (1899). Type host: *Crotophaga sulcirostris*.

Synonym * *Lipeurus crotophagae* McGregor, Psyche XXIV, p. 106, f. 4 (1917). Type host: *Crotophaga sulcirostris*.

1 male, from *Crotophaga ani*, San Felipe, 18 v '38.

Columbicola Ewing, Man. Ext. Paras. p. 190 (1929).
Genotype: *Pediculus columbae* Linne.

Columbicola columbae (Linne), Syst. Nat. p. 614 (1758). Type host: *Columba livia*.

2 females, from *Leptotila verreauxi* (paloma rabo blanco), San Felipe, 18 v 38.

Acidoproctus Piaget, Tijd. voor Ent. VI, p. 178 (1878).

Genotype: *marginatus* Piaget, syn. of *rostratus* Rudow.

Acidoproctus rostratus Rudow, Beitr. zur Kenntn. d. Malloph., Diss. p. 46 (1869). Halle. Type host *Alopochen aegyptiaca*.

Synonym * *Acido. bifasciatus* Piaget, Tijd. voor Ent. XXI, p. 181, Pl. 12, f. g (1878). Type host: *Dendrocygna viduata*.

2 males, 1 female, 2 nymphs, from *Dendrocygna viduata* (pato guire), Flores Moradas, Guarico, 18 ii 38.

Brüelia Kéler, Arb. morph. tax. Ent., Berl. III, 257 (1936).

Genotype: *rossittensis* Keler. (Plaque V).

Brüelia amazonae n. sp.

Female: Body length 1.71 mm., Head; length .36 mm., width .34 mm.

General color white. The various markings vary through shades of brown to black.

Female (f. 38): Head (f. 37): Internal band behind the bend and temple infuscated. Eye with setula. No prosternum. Pro-epimeron with bright, white spot in prothorax. Proepimera are directed backward and subcontiguous on median line between coxae 2. Metathorax with posterior rounded angle. Abdomen (f. 38): Tergal plates 2-8 bordered with black within. Sternal transverse bands, with anterior and posterior band connected laterally on each segment. Ninth tergite bilobed with infuscated triangle each side.

Male (f. 39): Body length 1.35 mm., Head; length .33 mm., width .30 mm. Same as female except for end of abdomen. Tergal plates 2-7 banded within with black, 5-8 narrowed medianly and the narrowed median portion directed forward.

This species belongs nearest to *Brüelia ornatissima* Giebel (f. 42 and 43). It differs from *ornatissima* in its smaller size, reduction in the infuscated sternal bands, increase in the infuscated margins of tergal plates within and in the triangular markings on the 9th segment of abdomen of female.

5 males, 2 females from Amazona ochrocephala, Urama, E. Carabobo, 25 iii 38.

Type, female and allotype, male in the collection of the author. Paratypes to be deposited in the collection of the Instituto Nacional de Higiene at Caracas, Venezuela.

Brüelia cela n. sp.

Male (f. 41): Body length 1.57 mm., Head; length .37 mm., width .34 mm.

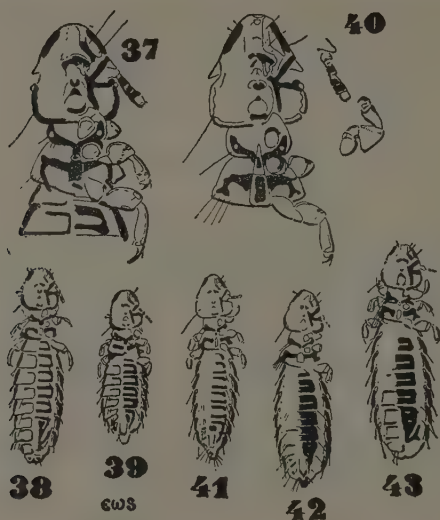
General color clear white with markings varying through shades of brown to black.

Head (f. 40): Internal bands and temples white. No prosternum. Proepimeron with a bright, clear spot in prothorax. Proepimera mesally directed backward and separated between coxae 2. Tergal plates (f. 41) with fragments of black margin within on 6-8. Two transverse bands on each sternite, the anterior separated from the posterior.

This species is nearest to *Brüelia amazonae* n. sp. discussed above. It differs in having the internal bands of the head and the temporal margins clear white and in the almost complete absence of infuscation on the tergal plates within and the male is more slender. It differs from *ornatissima* Giebel in the same features that *amazonae* does.

A sole male from Casicus cela cela (arrendajo) San Felipe, 18 v 38.

Type, male to be deposited in the collection of the Instituto Nacional de Higiene at Caracas, Venezuela.



Plaque V (ff. 37-43) *Brüelia* spp.

- 37. *Brüelia amazonae* n. sp., male, anterior portion.
- 38. Same, female, total.
- 39. Same, male, total.
- 40. *Brüelia cela* n. sp. male, anterior portion.
- 41. Same, male, total.
- 42. *Brüelia ornatissima* Giebel, male, total.
- 43. Same, female, total.

Oxylipeurus (Mjöberg) Clay, Zool. Soc. London, Proc. B. CVIII -2, p. 157 (1938). Genotype *Lipeurus inaequalis* Piaget.

Oxylipeurus penelope Clay, Zool. Soc. London, Proc. B. XVIII -2, p. 185, Pl. 13, f. 2 (1938). Type host: *Penelope* p. purpurascens.

1 female, from *Crax nigra* (paujil), San Felipe, 16 v 38. *Paragoniocotes* Cummings, Ann. Mag. Nat. Hist. XVII, p. 102 (1916). Genotype: *gripocephalus* Cummings.

Paragoniocotes sp.

1 male, from *Pyrhula leucotis emma* (perico montañero), Curupao, 22 xii 37.

Paragoniocotes venezolanus n. sp.

Female (f. 48): Body length 1.57 mm., Head; length .40 mm., width .39 mm. (Plaque VI).

General color, white with dilute infuscation. Markings varying through shades of brown to black.

Head (f. 44): Circumfasciate: longer than wide; a strong trabecular spine projects back under base of antenna; minute setulae about the margin. A pale, transverse band across the forehead bears a medio-lateral seta and indicates the clypeus. Temple with a long seta. In ventral space between the antennal and internal bands are two setae and a setula. Prothorax: with a seta behind the spiracle. Metathorax: The posterior margin rounded, with 5 setae each side, mid-margin bare. Abdomen (f. 48): Spiracles on tergites 2-7. Tergal plates divided medially, each on posterior bordered with a long seta submedian, another, similar, medio-laterad and a short seta on lateral margin. Latero-posterior angle of 7th tergite (f. 49) bears a sclerotized ringlike structure (f. 50). Ninth tergite bilobed by a terminal, median incision. Female genital region (f. 49): The genital blotch widened and rounded cephalad narrowed behind. Vaginal margin narrow and pointed behind, its margin bearing 12 short spinules followed by 12 short setae. Eighth pleuron bears ventrally 3 thick, short, spine-like setae, each with the apex drawn out hairlike.

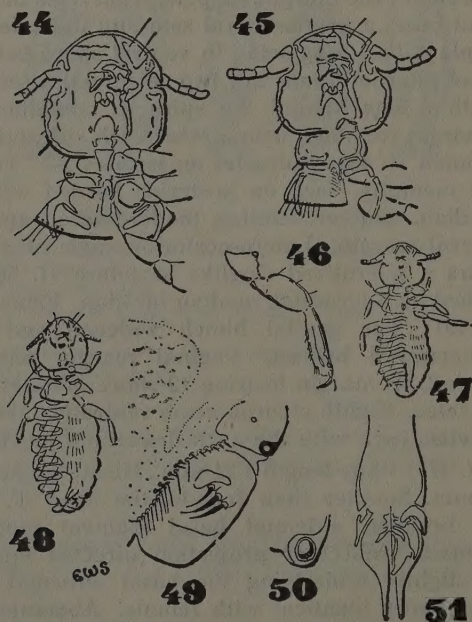
Male (f. 47): Body length 1.21 mm., Head; length .35 mm., width .36 mm. Smaller than female, the head (f. 45) proportionally broader, antennal basal segment much larger than in female, trabecular projection directed laterad and only very slightly underlying the basal antennal segment. Thorax apparently identical with female. Abdomen (f. 47): Tergites continuous from side to side, the 9th rounded behind. Ringlike structure on margin of 7th as in female, the 9th rounded behind. Male genital blotch (f. 47) rounded forward. Male genital armature (f. 51) distinct and complex.

This is the first species of *Paragoniocotes* to be recorded from a bird other than a parrot and the fifth in all. It is near-

est to *P. neivai* Guimarães 1940 which it resembles in several details but from which it differs, as also from *fasciatus* (Piaget 1880) and *abnormis* (Kellogg) 1906, in the female having a well-developed trabecular spine extending backward under the basal segment of the antenna. From *P. gripocephalus* Cummings 1916 it differs in having the head in both sexes about as wide as long.

4 males, 2 females from *Casicus cela cela* (arrendajo) San Felipe 18 v 38.

Type female and allotype male in the collection of the author. Paratypes to be deposited in the collection of the Instituto Nacional de Higiene at Caracas, Venezuela.



Plaque VI (ff. 44-51) *Paragoniocotes venezolanus* n. sp.

- 44. Female, anterior portion.
- 45. Male, anterior portion.
- 46. Hind leg, ventral.
- 47. Male, total.
- 48. Female, total.
- 49. Female, hypopigium, ventral.
- 50. Ringlike structure from seventh abdominal tergite.
- 51. Male genital structure.

Strongylocotes Taschenberg, Nov. Acta. Ksl. Peop.-Carol.
Deutsch Akad. d. Naturf. XLVI, p. 54 (1882). Genotype:
Gonoides complanatus Piaget.

Strongylocotes complanatus fimbriatus Clay, Zool. Soc. London, Proc. 1937, p. 156, Pl. 4, f. 3 (1937). Type host: *Crypturellus c. cinnamomeus* and *C. c. mexicanus*.

8 males, 5 females, from *Crypturus v. variegatus*. Lagunillas, E. Zulia, 17 iii 38.

Physconelloides Ewing, Wash. Acad. Sci., Journ. XVII, p. 94 (1927). Genotype: *ceratoceps* Ewing.

Synonym * *Goniocatacanthus* Guimarães, Univ. S. Paulo, Mus. Paulista, Revista XX, p. 225 (1936). Type host: *matagrossensis* Guimarães,

Physconelloides ceratoceps Ewing, Wash. Acad. Sci. Jour., XVII, p. 94 (1927). Type host: *Leptotila ochroptera chlo-rauchenia*.

Synonym * *Gonicotacanthus mattogrossensis* Guimarães, Univ. S. Paulo, Mus. Paulista, Revista XX, p. 226, Est. I, Fig. 2, Est. IV, Fig. 8, 9 (1936). Type host: *Columbigallina m. miuta* (rolinha).

4 females from "wild turtle dove" sin data.

RESUMEN

Se trata de una colección de Mallophaga venezolanos entregados en 1938 por Anduze. Todos los ejemplares con pocas excepciones fueron de su colección. Dicha colección está representada por treinta y dos especies obtenidas de veintún huéspedes. Seis especies nuevas junto con *Menopon cracis* Giebel son descritas. Por primera vez se indica la sinonimia de algunas especies. Respecto a *Menopon cracis* Giebel se da a conocer los adultos machos y hembras, obtenidas

del *Crax nigra* (paujil) de Yaracuy. Las especies nuevas son *Myrsidea nagnideus* Stafford cuyo huésped es el *Pitangus sulfuratus rufipennis* (cristofué) del Guárico; *Colpocephalum anduzei* Stafford obtenida de *Aratinga pertinax* (perico cara sucia) de Yaracuy; *Colpocephalum crotophagae* Stafford del *Crotophaga ani* (garrapatero) de Yaracuy; *Brüelia amazonae* Stafford del conocido loro *Amazona ochrocephala* del E. Carabobo; *Paragoniocotes venezolanis* Stafford, parásito del *Casicus cela cela* (arrendajo) de Yaracuy. Este último por primera vez se observa en *Casicus cela cela*, las otras cuatro especies conocidas son parásitos de psitacidos.